China Power Sector

29 April 2013

Plugged in

We initiate coverage on the China coal-fired IPPs and wind IPPs. For the stocks for which we have Outperform ratings, our target prices suggest 14-21% potential upside. Most of their P/Es are below historical averages and have high 13-118% EPS CAGR for 2013F-2015F. Our top picks within the sector are Huadian (1071 HK), Huaneng (902 HK) and Huaneng Renewables (958 HK).

We prefer coal-fired IPPs over wind IPPs as we believe softer coal prices and stabilized power plant utilization will continue to improve earnings in the medium term.

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- **We prefer coal-fired IPPs over wind IPPs** as we believe softer coal prices and stabilized power plant utilization in China will continue to improve earnings in the medium term. Our assumptions for growth in unit fuel cost are conservative (a 5-6% YoY decline in 2013F) and we see potential upside to our earnings forecasts. A 1% higher-than-expected decline in our unit fuel cost assumption would improve our 2013F earnings forecasts by 3-8%.
- **Improvement in wind resources and grid curtailment** could lift wind IPP earnings significantly in 2013F (possibly by 22-450% YoY). Capex is likely to remain high in the coming years and net gearing, in general, should trend upward. Given the high operating and financial leverage of China's IPPs, any negative moves in key drivers could have a substantial impact on earnings.
- **Catalysts** for coal-fired IPPs include (1) achieving company targets of a decline in unit fuel cost, (2) capacity expansion coming back on track, and (3) stabilized power plant utilization. For wind IPPs, catalysts include (1) achieving annual newly installed capacity targets, and (2) substantial rebounds in utilization rates in 2013F.
- **Near-term upside risks.** Coal-fired IPPs: (1) weaker coal prices, (2) a stronger-than-expected recovery in utilization, and (3) weaker-than-expected hydropower generation that lifts coal-fired power utilization. Wind IPPs: (1) better-than-expected wind resources and the lifting of power grid curtailments, and (2) a rebound in CER prices that drives stronger-than-expected CDM income.
- **Key downside risks.** Coal-fired IPPs: (1) a sharp surge in coal price, (2) higher-than-expected borrowing costs and (3) worse-than-expected domestic power demand. Wind IPPs: (1) slower-than-expected capacity expansion if power grid curtailment remains challenging, (2) higher-than-expected borrowing costs, (3) worse-than-expected power demand, and (4) delays in the construction of China's ultra-high voltage transmission lines.

China IPPs – valuation summary

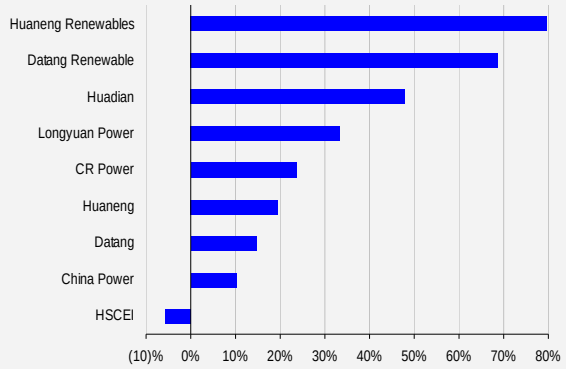
Company	Stock code	CCBIS rating	Price (HK$)*	Target (HK$)	P/E (x) 2013F	EPS CAGR (%) 2013-2015F	P/B (x) 2013F	ROE (%) 2013F
China Power	2380 HK	O	2.75	3.20	8.0	16.7	0.8	9.8
CR Power	836 HK	O	24.45	29.00	12.2	14.9	1.9	16.5
Datang	991 HK	N	3.44	3.50	8.2	12.6	0.8	10.2
Huadian	1071 HK	O	4.12	5.00	8.2	37.8	1.1	14.3
Huaneng	902 HK	O	8.80	10.00	10.5	26.7	1.6	15.8
DTR	1798 HK	O	1.70	2.00	15.9	118.3	1.1	6.8
HNR	958 HK	O	2.54	3.00	13.6	49.3	1.3	10.1
Longyuan	916 HK	N	7.19	7.50	14.6	17.9	1.4	10.2

** Price as at close on 24 April 2013*

CCBIS ratings: O = Outperform; N = Neutral

Source: CCBIS estimates, Bloomberg

China IPPs year-to-date performance 2013



Source: CCBIS estimates, Bloomberg

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Investment summary

Values not in the price

We initiate coverage on the China coal-fired IPPs and wind IPPs. For the stocks for which we have Outperform ratings, our target prices suggest 14-21% potential upside. Most of their P/Es are below historical averages and have high EPS CAGR for 2013-2015F. Within the sector, we prefer coal-fired IPPs as we believe the outlook for softer coal prices could continue to improve their earnings in the medium term. As our assumptions on their growth in unit fuel cost are for a conservative 5-6% decline, we see potential upside to our earnings forecasts. A 1% higher-than-expected decline in unit fuel cost assumption would improve our 2013F earnings forecasts by 3-8%.

For wind IPPs, improvement in wind resources and grid curtailment could lift earnings significantly in 2013F, which share prices do not fully reflect at this point. Capex, however, will remain high in the coming years and net gearing is likely to rise accordingly. Given the high operating and financial leverage of the IPPs, any negative moves in key drivers – for example a decline in plant utilization or a hike in interest rates – could have a substantial impact on earnings.

Positive outlook for earnings growth

We forecast high earnings growth for both the coal-fired IPPs and wind-IPPs in 2013F, as both segments will benefit from declines in unit fuel cost. For the coal-fired IPPs, lower unit fuel cost will come about because of declines in coal prices while the wind IPPs can look forward to some relenting in the power grid curtailment. Due to substantial 46-85% YoY earnings declines for HNR and DTR in 2012, our forecast of high 125-450% earnings growth in 2013F is due in part to the low earnings base effect in 2012. Overall, we forecast 2013F-2015F EPS CAGR of 13-38% for the coal-fired IPPs and 18-118% for the wind IPPs.

Electricity supply to match demand implies average plant utilization will stabilize

We forecast 2013F GDP growth at 8%. We project the ratio of electricity consumption growth-to-GDP growth will increase from 0.73x in 2012 to 0.88x in 2013F (versus the average value of 1.0x for 1991-2012), we estimate electricity consumption growth at 7% for 2013F. With newly installed capacity likely to fall to 79GW in 2013F or at a growth rate (+7% YoY) similar to electricity consumption, average power plant utilization in China is likely to remain flat. If hydropower generation maintains modest growth in 2013F, we forecast average plant utilization for coal-fired IPPs will drop around 2% YoY.

Weakening coal price to continue to benefit coal-fired IPPs

Above historical average coal inventory and marginal growth in 1Q13 power demand (+2.1% YoY) suggests weaker-than-expected demand for thermal coal resulting in a 2.4% YTD decline in the spot price for 5,500kCal thermal coal in QHD. As we expect the renminbi to continue to appreciate against the US dollar over the medium term, demand for imported coal will remain strong making a sharp rebound in domestic coal price highly unlikely in 2H13F. We forecast coal-fired unit fuel cost for the coal-fired IPPs will decline 5-6% in 2013F and result in a 1.7-3.4ppt expansion in operating margin.

Improving grid curtailment to maintain capacity expansion for wind IPPs

Before power grid curtailment is fully resolved, we do not expect any acceleration in wind power development; thus, we expect newly added wind power capacity with grid connection per year to maintain at 16GW in 2013F-2015F. Grid curtailment in Inner Mongolia and northeastern China will improve this year as the government has increased the cross-regional electricity transmission from northeastern China to northern China. Within the sector, we forecast DTR will see the greatest improvement in average plant utilization given it has the largest percentage of wind farms in Inner Mongolia and northeastern China (65% of total versus 52% for HNR and 44% for Longyuan).

Top picks: Huadian, Huaneng, and HNR

For the coal-fired IPP sector, Huaneng and Huadian are our top picks, as we believe the market has not fully priced in their strong earnings recovery on weakening coal prices. Moreover, given Huadian's high earnings sensitivity to changes in coal price, a higher-than-expected decline in unit fuel cost could result in an even bigger improvement in its earnings. Within the wind IPPs sector, we prefer HNR given its diversified wind farm portfolio and positive outlook for capacity expansion. However, if the decline in plant utilization is higher-than-expected, it could have a bigger positive effect on DTR's earnings given DTR's high earnings sensitivity to changes in plant utilization. At current share price levels, our target prices for Huaneng, Huadian and HNR suggest 14%, 21%, and 18% potential upside.

Catalysts for the shares

Catalysts for the coal-fired IPPs are: (1) the companies in question achieving their targets for unit fuel cost decline, (2) capacity expansion getting back on track, and (3) stabilized power plant utilization. For the wind IPPs, catalysts for the shares are: (1) the companies in question achieving their annual newly installed capacity targets, and (2) utilization rebounding substantially in 2013F.

Upside and downside risks

Upside risks to the **coal-fired IPP sector** include: (1) further weakening in coal prices, (2) a stronger-than-expected recovery in utilization rates, (3) weaker-than-expected hydropower generation to lift coal-fired power utilization, (4) stronger-than-expected synergy from coal-related business, and (5) re-ignition of power system reform with positive outcomes. Downside risks to the sector include: (1) a sharp surge in coal price, (2) higher-than-expected borrowing costs, and (3) worse-than-expected power demand.

Upside risks to the **wind IPP sector** include: (1) better-than-expected wind resources and power grid curtailment improvement, (2) a rebound in CER prices that drives stronger-than-expected CDM income, (3) better-than-expected cash flow improvement, and (4) acceleration of offshore wind farm installations in China. Downside risks to the sector include: (1) slower-than-expected capacity expansion should power grid curtailment remain challenging, (2) higher-than-expected borrowing costs, (3) worse-than-expected power demand, and (4) delays constructing of China's ultra-high voltage transmission lines.

Valuation comparison

Company	Stock code	CCBI rating	Market cap (HK$b)	Market price (HK$)*	Target price (HK$)	Upside/ downside (%)	P/E (x) 2013F	P/E (x) 2014F	EPS growth (%) 2013F	EPS growth (%) 2014F	P/B (x) 2013F	P/B (x) 2014F	Yield (%) 2013F	Yield (%) 2014F	ROE (%) 2013F	ROE (%) 2014F
China coal-fired power																
China Power	2380 HK	O	15.4	2.75	3.20	16.4	8.0	7.1	22.9	13.0	0.8	0.7	5.0	5.6	9.8	10.4
CR Power	836 HK	O	116.7	24.45	29.00	18.6	12.2	11.5	25.9	6.5	1.9	1.7	2.7	2.8	16.5	15.7
Datang	991 HK	N	65.9	3.44	3.50	1.7	8.2	7.3	9.9	13.3	0.8	0.8	4.0	4.5	10.2	10.8
Huaneng	902 HK	O	118.0	8.80	10.00	13.6	10.5	9.7	71.6	8.5	1.6	1.5	5.1	5.5	15.8	15.6
Huadian	1071 HK	O	37.0	4.12	5.00	21.4	8.2	7.5	98.0	9.7	1.1	1.0	4.1	4.4	14.3	14.1
China wind power																
Huaneng Renewables	958 HK	O	21.5	2.54	3.00	18.1	13.6	10.4	127.0	30.6	1.3	1.2	1.7	2.2	10.1	12.0
Datang Renewable	1798 HK	O	12.4	1.70	2.00	17.6	15.9	11.6	455.8	37.0	1.1	1.0	1.9	2.6	6.8	8.8
Longyuan	916 HK	N	58.2	7.19	7.50	4.3	14.6	12.3	14.2	19.0	1.4	1.3	1.4	1.6	10.2	11.1

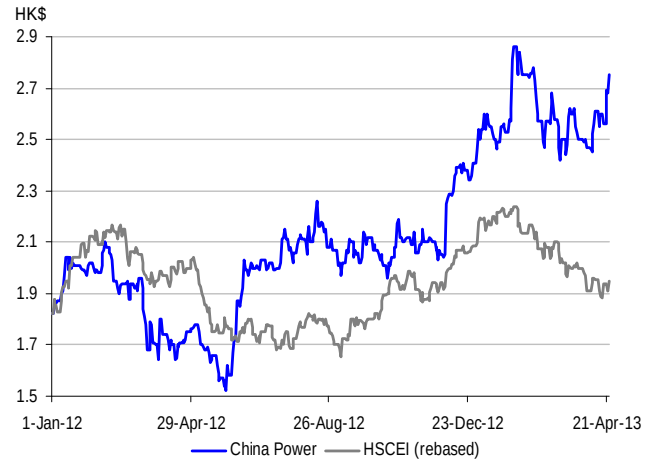
** Price as at close on 24 April 2013*

CCBIS ratings: O = Outperform; N = Neutral

Source: CCBIS estimates

Investment snapshot

China Power – stock price vs. HSCEI

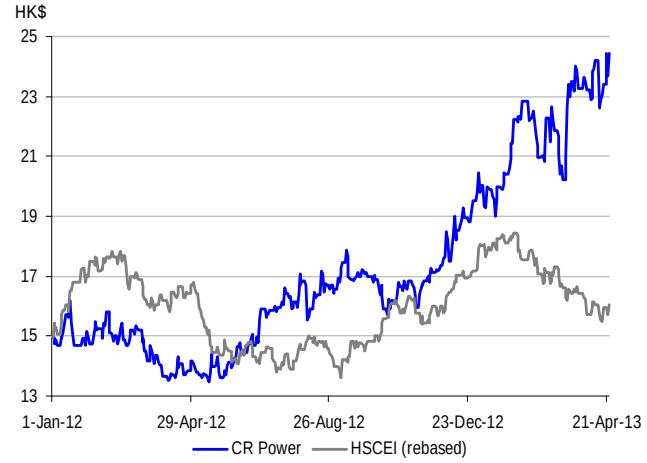


Source: CCBIS estimates, Bloomberg

China Power (2380 HK, Outperform; TP: HK$3.20)

- Initiate with a Neutral rating and HK$3.20 target price suggesting 16% potential upside. 2013F P/E also looks attractive at 8x versus the three-year average of 11x and high EPS CAGR of 17%
- Capacity expansion to continue with 4.5GW capacity to be added in 2013F-2014F, increasing the company's attributable capacity to 14.3GW by 2014F
- Expect a 5% decline in unit fuel cost in 2013F to improve earnings by 28%
- Less exposed to declines in coal price due to company's high exposure to hydropower

CR Power – stock price vs. HSCEI

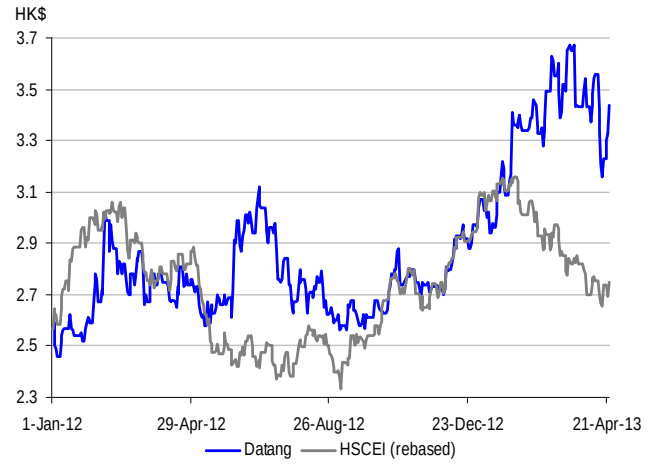


Source: CCBIS estimates, Bloomberg

CR Power (836 HK, Outperform; TP: HK$29.00)

- Initiate with Outperform. Target price of HK$29.00 implies 19% potential upside. 2013F P/E of 12x also looks attractive versus historical average of 14x
- Capacity could expand further, from 25GW at end-2012 to 32GW by 2015F
- Unit fuel cost target to decline 6% YoY in 2013F based on the expectation that the spot coal price will remain flat until year end
- Increasing total coal production to 20m tonnes in 2013F with higher price on better coal quality to lift profit contribution from coal business by 107%

Datang – stock price vs. HSCEI

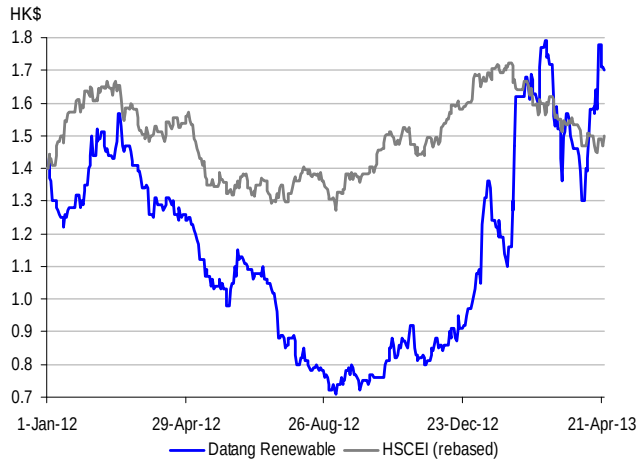


Source: CCBIS estimates, Bloomberg

Datang (991 HK, Neutral; TP: HK$3.50)

- Initiate with a Neutral rating on the shares with target price of HK$3.50 suggesting only 2% potential upside
- 2013F P/E of 8x appears undemanding; however, delays in the commissioning of its non-power projects and/or failure of its projects to deliver reasonable returns could have a substantial impact on earnings
- To be conservative, we look for the coal-to-chemical project to generate a modest net profit of RMB58m in 2013F
- Net gearing will stay above 310% in 2013F-2015F given the huge capex to be spent on the development of coal-to-gas projects in the next three years

Datang Renewable – stock price vs. HSCEI

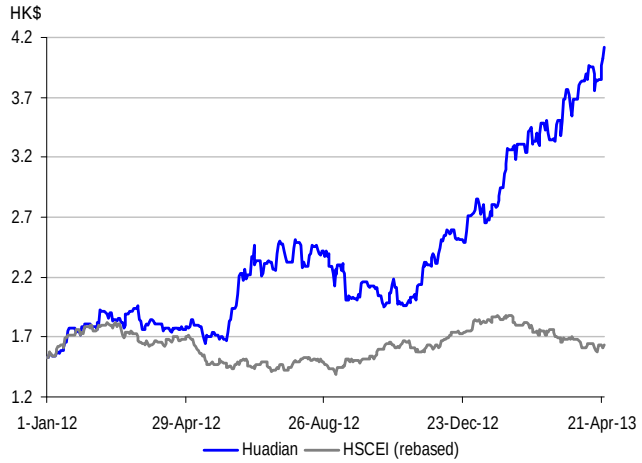


Source: CCBIS estimates, Bloomberg

Datang Renewable (1798 HK, Outperform; TP: HK$2.00)

- Initiate with Outperform and HK$2.00 target price. 2013F P/E also looks attractive at 16x with high EPS CAGR of 118% in 2013F-2015F
- Due to its largest exposure to Inner Mongolia and northeastern China, should there be some easing in the power grid curtailment in those areas, it could lift the company's average plant utilization measurably, by 12% in 2013F versus -10% in 2012
- Newly added wind power capacity expansion is forecast to accelerate from 497MW in 2012 to 800-1,000MW p.a. in 2013F-2015F
- Diminishing concerns over CDM income as it contributes only 6% of pre-tax profit in 2013F

Huadian – stock price vs. HSCEI

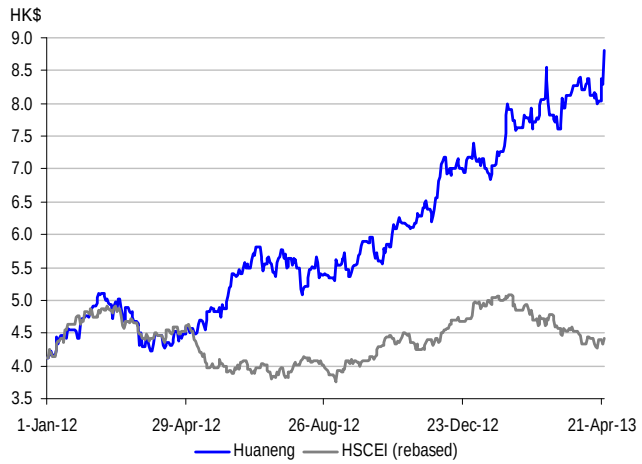


Source: CCBIS estimates, Bloomberg

Huadian (1071 HK, Outperform; TP: HK$5.00)

- Initiate with Outperform and HK$5.00 target price. 2013F P/E of 8x also looks attractive given high EPS CAGR of 38% for 2013F-2015F
- High earnings sensitivity to changes in coal cost means a 1% extra reduction in unit fuel cost could result in an 8% increase in our earnings forecast
- Margin expansion will continue on weak coal price outlook, i.e. operating margin should improve from 12% in 2012 to 15-16% in 2013F-2015F
- Improvement in operating cash inflows will continue, causing net gearing to come down

Huaneng – stock price vs. HSCEI

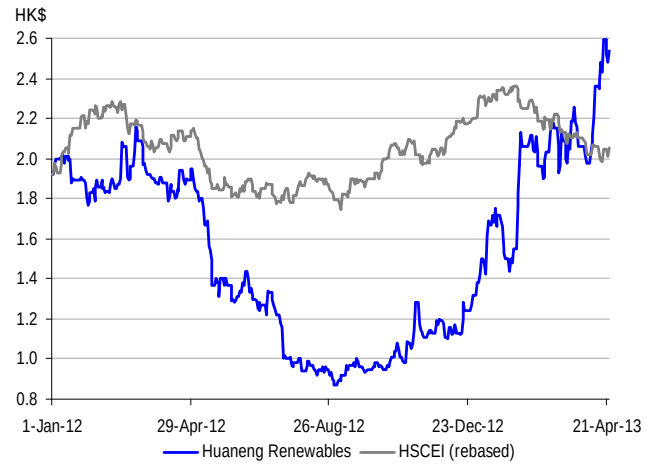


Source: CCBIS estimates, Bloomberg

Huaneng (902 HK, Outperform; TP: HK$10.00)

- Initiate with Outperform and HK$10.00 target price
- Free cash flows to remain positive in 2013F-2015F on substantial improvement in operating cash inflows given the softer outlook for coal prices
- Net gearing declining from 238% in 2012 to 176% in 2015F, allowing for further capacity expansion and providing potential upside to our earnings forecasts
- Upside on capacity forecast as Huaneng's controllable capacity will increase from 64GW in 2012 to 70GW by 2015, yet lower than its target of 80GW capacity

Huaneng Renewables – stock price vs. HSCEI

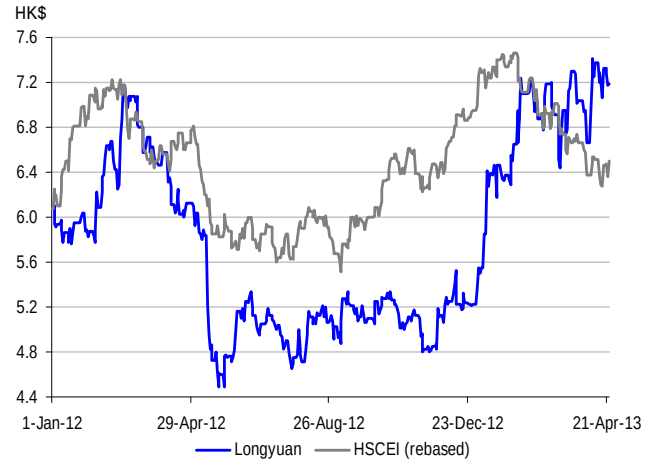


Source: CCBIS estimates, Bloomberg

Huaneng Renewables (958 HK, Outperform; TP: HK$3.00)

- Initiate with Outperform with target price of HK$3.00. 2013F P/E looks attractive at 14x 2013F P/E and with a high EPS CAGR of 49% in 2013F-2014F
- Accelerating wind power capacity expansion (from 554MW in 2012 to 1GW p.a. in 2013F-2015F) on improving power grid curtailment
- Plant utilization to recover strongly from -10% in 2012 to 7% in 2013 on large exposure to those areas with high curtailment rate
- Diminishing concern on CDM income cancellation as the percent contribution to pre-tax profit will decline from 17% in 2012 to only 3% in 2013F

Longyuan – stock price vs. HSCEI



Source: CCBIS estimates, Bloomberg

Longyuan (916 HK, Neutral; TP: HK$7.50)

- Initiate with a Neutral rating on the shares as our target price of HK$7.50 suggests only 4% potential upside. 2013F P/E is trading on par to its two-year average of 15x and EPS CAGR of 18% for 2013F-2015F
- Power grid curtailment will gradually improve, yet utilization recovery for Longyuan (+3% in 2013F) should be slower than peers (up 7-12%)
- Capacity addition of 2GW p.a. in 2013-2015F will translate to three-year capacity CAGR of 16%
- Percentage of CDM income to pre-tax profit will decline from 20% in 2012 to only 2% in 2013F. Thus, the impact to earnings appears insignificant

China coal-fired IPPs: comparison of operations

	Huaneng (902 HK)		Datang (991 HK)		Huadian (1071 HK)		CR Power (836 HK)		China Power (2380 HK)	
Share price (HK$)*	8.80		3.44		4.12		24.45		2.75	
Target price (HK$)	10.00		3.50		5.00		29.00		3.20	
Rating	Outperform		Neutral		Outperform		Outperform		Outperform	
Upside/(downside) (%)	13.6		1.7		21.4		18.6		16.4	
Marketing cap (HK$m)	117,984		65,870		37,025		116,705		15,418	
Attributable installed capacity	MW	*+/- (%)*	MW	*+/- (%)*	MW	*+/- (%)*	MW	*+/- (%)*	MW	*+/- (%)*
2012	54,443	*2.8*	27,430	*2.4*	29,175	*14.0*	25,186	*13.9*	11,688	*3.2*
2013F	55,763	*2.4*	30,241	*10.3*	31,782	*8.9*	27,935	*10.9*	13,581	*16.2*
2014F	58,096	*4.2*	31,768	*5.0*	35,052	*10.3*	30,635	*9.7*	14,329	*5.5*
2015F	60,769	*4.6*	33,614	*5.8*	37,376	*6.6*	31,635	*3.3*	14,329	*0.0*
2013-2015 capacity CAGR (%)	4		7		9		8		7	
% Geographical location in China (end-2012)										
East	31		18		12		39		48	
North	26		62		58		14		9	
Central	15		2		16		24		43	
Northwest	3		4		11		0		0	
South	17		11		3		18		0	
Northeast	9		4		0		4		0	
	100		100		100		100		100	
% attributable capacity fuel mix (end-2012)										
Thermal	95		81		91		92		75	
Hydro	2		12		5		1		25	
Wind	2		5		4		6		0	
Gas	1		1		0		0		0	
	100		100		100		100		100	
Consolidated net power generation	GWh	*+/- (%)*	GWh	*+/- (%)*	GWh	*+/- (%)*	GWh	*+/- (%)*	GWh	*+/- (%)*
2012	285,455	*(3.5)*	190,522	*(0.8)*	146,600	*4.3*	116,273	*3.7*	49,203	*3.8*
2013F	295,686	*3.6*	192,965	*1.3*	159,273	*8.6*	128,224	*10.3*	52,807	*7.3*
2014F	306,150	*3.5*	200,656	*4.0*	176,181	*10.6*	147,039	*14.7*	56,699	*7.4*
2015F	321,646	*5.1*	210,173	*4.7*	189,694	*7.7*	161,746	*10.0*	59,880	*5.6*
2013-2015F generation CAGR (%)	4		3		9		12		7	
Weighted average on-grid tariff (incl. VAT)	RMB/MWh	*+/- (%)*	RMB/MWh	*+/- (%)*	RMB/MWh	*+/- (%)*	RMB/MWh	*+/- (%)*	RMB/MWh	*+/- (%)*
2012	459	*5.7*	414	*5.5*	442	*3.8*	449	*4.7*	412	*5.1*
2013F	459	*0.0*	414	*0.0*	442	*0.0*	445	*(1.0)*	417	*1.1*
2014F	459	*0.0*	414	*0.0*	442	*0.0*	445	*0.0*	417	*0.2*
2015F	469	*2.0*	421	*1.8*	447	*1.2*	452	*1.5*	422	*1.1*
Weighted average utilization hours		*+/- (%)*		*+/- (%)*		*+/- (%)*		*+/- (%)*		*+/- (%)*
2012	4,903	*(7.0)*	5,164	*(2.5)*	4,366	*(7.4)*	4,725	*(13.2)*	4,080	*(10.1)*
2013F	4,972	*1.4*	5,012	*(2.9)*	4,342	*(0.5)*	4,718	*(0.2)*	3,887	*(4.7)*
2014F	4,953	*(0.4)*	5,073	*1.2*	4,388	*1.1*	4,950	*4.9*	4,207	*8.2*
2015F	4,990	*0.7*	5,140	*1.3*	4,600	*4.8*	5,279	*6.6*	4,493	*6.8*
Operating margin	%	*+/- (ppt)*	%	*+/- (ppt)*	%	*+/- (ppt)*	%	*+/- (ppt)*	%	*+/- (ppt)*
2012	12.7	*6.1*	17.4	*4.2*	11.8	*6.0*	18.9	*3.6*	20.3	*6.2*
2013F	16.1	*3.4*	19.5	*2.1*	15.2	*3.4*	21.6	*2.7*	22.1	*1.7*
2014F	16.4	*0.3*	20.5	*1.0*	15.3	*0.1*	21.2	*(0.4)*	22.0	*(0.1)*
2015F	16.2	*(0.2)*	20.6	*0.1*	16.1	*0.8*	20.9	*(0.3)*	23.1	*1.1*
Net profit	RMB m	*+/- (%)*	RMB m	*+/- (%)*	RMB m	*+/- (%)*	RMB m	*+/- (%)*	RMB m	*+/- (%)*
2012	5,512	*367.0*	4,062	*106.1*	1,447	*1860.1*	7,479	*68.0*	1,181	*133.8*
2013F	9,364	*69.9*	4,421	*8.8*	2,957	*104.4*	9,507	*27.1*	1,516	*28.4*
2014F	10,156	*8.5*	5,010	*13.3*	3,244	*9.7*	10,126	*6.5*	1,713	*13.0*
2015F	11,094	*9.2*	5,748	*14.7*	3,904	*20.3*	11,460	*13.2*	1,967	*14.8*

** Price as at close on 24 April 2013*

Source: CCBIS estimates

China coal-fired IPPs: valuation comparison

	Huaneng (902 HK)	Datang (991 HK)	Huadian (1071 HK)	CR Power (836 HK)	China Power (2380 HK)
P/E (x)					
2012	18.0	9.1	16.2	15.4	9.8
2013F	10.5	8.2	8.2	12.2	8.0
2014F	9.7	7.3	7.5	11.5	7.1
2015F	8.9	6.3	6.2	10.2	6.2
EPS (HK$)					
2012	0.49	0.38	0.25	1.59	0.28
2013F	0.84	0.42	0.50	2.00	0.34
2014F	0.91	0.47	0.55	2.13	0.39
2015F	0.99	0.54	0.67	2.41	0.44
EPS growth (%)					
2012	370.7	101.3	1,792.4	67.3	128.9
2013F	71.6	9.9	98.0	25.9	22.9
2014F	8.5	13.3	9.7	6.5	13.0
2015F	9.2	14.7	20.3	13.2	14.6
2013F-2015F HK$ EPS CAGR (%)	26.7	12.6	37.8	14.9	16.7
Dividend yield (%)					
2012	3.0	3.6	2.0	2.1	4.1
2013F	5.1	4.0	4.1	2.7	5.0
2014F	5.5	4.5	4.4	2.8	5.6
2015F	6.0	5.2	5.3	3.2	6.5
DPS (HK$)					
2012	0.26	0.12	0.08	0.51	0.11
2013F	0.45	0.14	0.17	0.65	0.14
2014F	0.49	0.15	0.18	0.69	0.15
2015F	0.53	0.18	0.22	0.78	0.18
DPS growth (%)					
2012	323.4	(8.4)	N/A	69.8	103.7
2013F	71.6	9.9	106.4	27.1	21.5
2014F	8.5	13.3	9.7	6.5	12.7
2015F	9.2	14.7	20.3	13.2	14.8
P/BV (x)					
2012	1.77	0.88	1.20	2.13	0.82
2013F	1.57	0.81	1.10	1.91	0.76
2014F	1.43	0.75	1.00	1.71	0.71
2015F	1.30	0.70	0.89	1.53	0.66
ROE (%)					
2012	10.3	10.1	8.1	14.7	8.4
2013F	15.8	10.2	14.3	16.5	9.8
2014F	15.5	10.8	14.1	15.7	10.4
2015F	15.4	11.4	15.2	15.9	11.1
Net gearing (%)					
2012	237.7	315.3	404.7	110.5	226.8
2013F	214.7	329.4	389.0	108.5	230.9
2014F	198.8	321.8	374.9	99.5	214.3
2015F	183.5	310.9	341.3	81.8	186.6
Interest cover (x)					
2012	1.9	1.6	1.1	3.3	2.3
2013F	2.5	1.6	1.4	3.9	2.2
2014F	2.6	1.7	1.5	3.8	2.3
2015F	2.8	1.7	1.5	4.3	2.4

Source: CCBIS estimates

China wind IPPs: comparison of operations

	Datang Renewable (1798 HK)		Huaneng Renewables (958 HK)		Longyuan Power (916 HK)		
Share price (HK$)*	1.70		2.54		7.19		
Target price (HK$)	2.00		3.00		7.50		
Rating	Outperform		Outperform		Neutral		
Upside/(downside) (%)	17.6		18.1		4.3		
Marketing cap (HK$m)	12,388		21,455		58,193		
Consolidated installed capacity (MW)	Wind	*+/- (%)*	Wind	*+/- (%)*	Coal-fired	Wind	*+/- (%)*
2012	5,669	*9.6*	5,457	*11.3*	1,875	10,544	*22.6*
2013F	6,469	*14.1*	6,457	*18.3*	1,875	12,544	*19.0*
2014F	7,369	*13.9*	7,457	*15.5*	1,875	14,544	*15.9*
2015F	8,369	*13.6*	8,457	*13.4*	1,875	16,544	*13.8*
2013-2015 capacity CAGR (%)	14		16		0	16	
% Geographical location in China (end-2012)							
Three northeastern provinces	22		21			23	
Inner Mongolia	43		31			21	
Southeastern coastal provinces	1		5			16	
Gansu	7		0			10	
Xinjiang	0		5			7	
Hebei	1		5			9	
Other regions	25		33			14	
	100		100			100	
Consolidated net power generation (GWh)	Wind	*+/- (%)*	Wind	*+/- (%)*	Coal-fired	Wind	*+/- (%)*
2012	8,293	*14.7*	7,786	*25.5*	10,497	16,027	*22.7*
2013F	10,488	*26.5*	10,796	*38.6*	10,497	21,182	*32.2*
2014F	12,675	*20.9*	13,425	*24.4*	10,497	25,340	*19.6*
2015F	14,993	*18.3*	15,579	*16.0*	10,497	29,578	*16.7*
2013-2015 generation CAGR (%)	22		26		0	23	
Weighted average on-grid tariff (incl. VAT) (RMB/MWh)	Wind	*+/- (%)*	Wind	*+/- (%)*	Coal-fired	Wind	*+/- (%)*
2012	603	*2.0*	605	*1.5*	452	582	*0.7*
2013F	603	*0.0*	605	*0.0*	452	585	*0.5*
2014F	603	*0.0*	605	*0.0*	458	585	*0.0*
2015F	603	*0.0*	605	*0.0*	468	585	*0.0*
Weighted average utilization hours	Wind	*+/- (%)*	Wind	*+/- (%)*	Coal-fired	Wind	*+/- (%)*
2012	1,752	*(10.2)*	1,774	*(9.6)*	5,990	1,985	*(2.0)*
2013F	1,962	*12.0*	1,898	*7.0*	5,990	2,050	*3.3*
2014F	2,080	*6.0*	1,974	*4.0*	5,990	2,071	*1.0*
2015F	2,163	*4.0*	2,014	*2.0*	5,990	2,091	*1.0*
CDM income/pre-tax profit	%	*+/- (ppt)*	%	*+/- (ppt)*	%		*+/- (ppt)*
2012	53.7	*16.8*	16.7	*(25.8)*	20.2		*(0.9)*
2013F	6.0	*(47.7)*	3.2	*(13.5)*	2.1		*(18.2)*
2014F	4.9	*(1.0)*	3.0	*(0.2)*	1.9		*(0.1)*
2015F	4.2	*(0.8)*	2.9	*0.0*	1.8		*(0.1)*
Operating margin	%	*+/- (ppt)*	%	*+/- (ppt)*	%		*+/- (ppt)*
2012	45.6	*(10.6)*	51.5	*(9.1)*	33.5		*3.6*
2013F	51.3	*5.7*	55.8	*4.3*	36.1		*2.7*
2014F	52.6	*1.3*	56.8	*0.9*	37.8		*1.7*
2015F	53.7	*1.1*	55.8	*(1.0)*	39.3		*1.5*
Net profit	RMB m	*+/- (%)*	RMB m	*+/- (%)*	RMB m		*+/- (%)*
2012	112	*(84.6)*	558	*(45.5)*	2,593		*0.6*
2013F	617	*450.2*	1,254	*124.8*	3,150		*21.5*
2014F	846	*37.0*	1,638	*30.6*	3,747		*19.0*
2015F	1,155	*36.6*	1,838	*12.2*	4,516		*20.5*

** Price as at close on 24 April 2013*

Source: CCBIS estimates

China wind IPPs: valuation comparison

	Datang Renewable (1798 HK)	Huaneng Renewables (958 HK)	Longyuan Power (916 HK)
P/E (x)			
2012	88.6	30.9	16.7
2013F	15.9	13.6	14.6
2014F	11.6	10.4	12.3
2015F	8.5	9.3	10.2
EPS (HK$)			
2012	0.019	0.082	0.431
2013F	0.107	0.187	0.492
2014F	0.146	0.244	0.586
2015F	0.200	0.273	0.706
EPS growth (%)			
2012	(84.5)	(52.6)	1.2
2013F	455.8	127.0	14.2
2014F	37.0	30.6	19.0
2015F	36.6	12.2	20.5
2013F-2015F HK$ EPS CAGR (%)	118.3	49.3	17.9
Dividend yield (%)			
2012	1.7	0.7	1.1
2013F	1.9	1.7	1.4
2014F	2.6	2.2	1.6
2015F	3.5	2.4	1.9
DPS (HK$)			
2012	0.029	0.019	0.079
2013F	0.032	0.042	0.097
2014F	0.044	0.055	0.116
2015F	0.060	0.062	0.139
DPS growth (%)			
2012	(40.5)	0.0	(7.0)
2013F	11.8	127.0	22.7
2014F	37.0	30.6	19.0
2015F	36.6	12.2	20.5
P/B (x)			
2012	1.13	1.46	1.58
2013F	1.08	1.32	1.43
2014F	0.99	1.19	1.31
2015F	0.90	1.08	1.18
ROE (%)			
2012	1.3	4.8	9.4
2013F	6.8	10.1	10.2
2014F	8.8	12.0	11.1
2015F	11.1	12.2	12.2
Net gearing (%)			
2012	313.6	193.9	146.3
2013F	348.6	228.1	152.6
2014F	351.8	247.5	154.8
2015F	359.2	258.7	152.6
Interest cover (x)			
2012	1.1	1.4	3.7
2013F	1.5	1.8	3.1
2014F	1.6	1.9	2.4
2015F	1.7	1.9	2.4

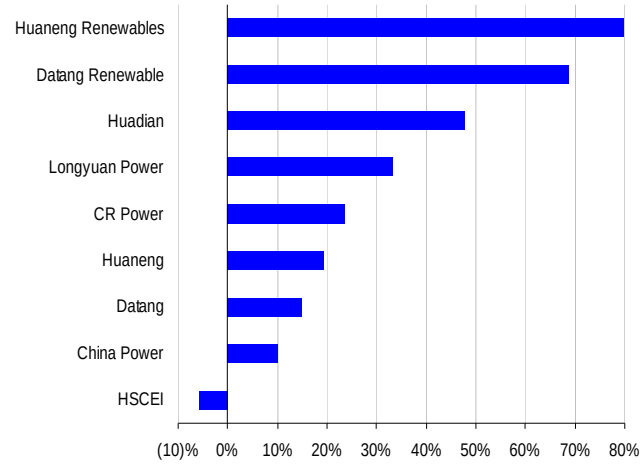
Source: CCBIS estimates

Valuation and risks

Outperformance to continue

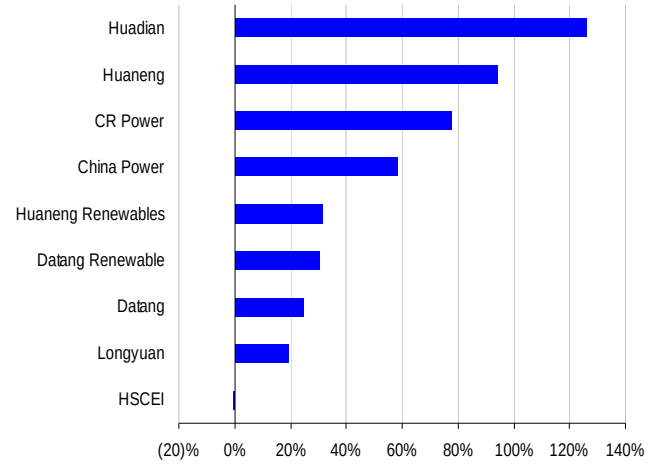
Over the past year, shares of China's coal-fired IPPs and wind IPPs have been up 19-126% versus -0.5% for the HSCEI. We believe that the outperformance of coal-fired IPP shares reflect weaker coal prices while the strong share price performance by the wind IPPs is due to improvements in both wind resources and power grid curtailments.

Absolute YTD share price performance in 2013



Source: CCBIS estimates, Bloomberg

Absolute performance to market in 12 months



Source: CCBIS estimates, Bloomberg

At the current level, we still see value in their shares as our target prices suggest 14-21% potential upside for the stocks for which we have Outperform ratings. Most of their P/Es are below historical averages and have high EPS CAGR for 2013F-2015F. Forced to choose between the coal-fired IPP sector and the wind IPP sector, we would take the coal-fired IPPs as we believe the weaker outlook for coal price could continue to improve their earnings in the medium term. As our assumptions on their growth in unit fuel cost are conservative – down 5-6% in 2013F and flat in 2014F – we see potential upside to our earnings forecasts. A 1% higher-than-expected decline in unit fuel cost assumption could improve our 2013F earnings forecasts by 3-8%.

For wind IPPs, improvement in wind resources and grid curtailment could lift earnings significantly in 2013F, which their current shares have not fully reflected at this point. Assuming their capex will remain high in the coming years, net gearing should continue to trend upward. Given their high operating and financial leverage, any negative moves in key drivers, for instance a decline in plant utilization and/or an interest rate hike, could have substantial impact on earnings.

China IPPs – valuation comparison

Company	Stock code	CCBI rating	Market cap (HK$b)	Market price (HK$)*	Target price (HK$)	Upside/ downside (%)	P/E (x) 2013F	P/E (x) 2014F	EPS growth (%) 2013F	EPS growth (%) 2014F	P/B (x) 2013F	P/B (x) 2014F	Yield (%) 2013F	Yield (%) 2014F	ROE (%) 2013F	ROE (%) 2014F
China coal-fired power																
China Power	2380 HK	O	15.4	2.75	3.20	16.4	8.0	7.1	22.9	13.0	0.8	0.7	5.0	5.6	9.8	10.4
CR Power	836 HK	O	116.7	24.45	29.00	18.6	12.2	11.5	25.9	6.5	1.9	1.7	2.7	2.8	16.5	15.7
Datang	991 HK	N	65.9	3.44	3.50	1.7	8.2	7.3	9.9	13.3	0.8	0.8	4.0	4.5	10.2	10.8
Huaneng	902 HK	O	118.0	8.80	10.00	13.6	10.5	9.7	71.6	8.5	1.6	1.5	5.1	5.5	15.8	15.6
Huadian	1071 HK	O	37.0	4.12	5.00	21.4	8.2	7.5	98.0	9.7	1.1	1.0	4.1	4.4	14.3	14.1
China wind power																
Huaneng Renewables	958 HK	O	21.5	2.54	3.00	18.1	13.6	10.4	127.0	30.6	1.3	1.2	1.7	2.2	10.1	12.0
Datang Renewable	1798 HK	O	12.4	1.70	2.00	17.6	15.9	11.6	455.8	37.0	1.1	1.0	1.9	2.6	6.8	8.8
Longyuan	916 HK	N	58.2	7.19	7.50	4.3	14.6	12.3	14.2	19.0	1.4	1.3	1.4	1.6	10.2	11.1

** Price as at close on 24 April 2013*

CCBIS ratings: O = Outperform; N = Neutra; U = Underperform

Source: CCBIS estimates

DCF-based valuation

We employ discounted cash flow (DCF) as our primary method to value China coal-fired IPP and wind IPPs as it captures the time value of their varied future cash flow. It also takes into account the pickup in free cash flow for coal-fired IPPs in the near term due to weakening coal prices and, in the medium term, the full contributions of their non-power projects. For the wind IPPs, it captures improving wind resources and easing power grid curtailment. In addition, the discount rates we employ take into account the volatility of future cash flows.

Valuation methodology for China coal-fired IPPs and wind IPPs

(%)	CR Power	China Power	Datang	Huaneng	Huadian	Datang Renewable	Huaneng Renewables	Longyuan
DCF-based valuation								
WACC	7.9	8.0	8.5	8.0	8.1	8.4	8.7	8.7
COE	10.2	11.5	13.2	11.0	12.0	12.1	12.7	12.4
COD	5.7	6.0	6.0	5.7	6.4	6.4	6.4	5.9
Debt/capital	40.0	50.0	55.0	45.0	55.0	55.0	55.0	50.0
Terminal growth rate	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0
DCF-based target price	29.00	3.20	3.50	10.00	5.00	2.00	3.00	7.50
Upside/(downside) to current share price	19	16	2	14	21	18	18	4
Recommendation	Outperform	Outperform	Neutral	Outperform	Outperform	Outperform	Outperform	Neutral

Source: CCBIS estimates

Top picks: Huaneng, Huadian, and HNR

Our target prices suggest 14-21% potential upside for the stocks with Outperform ratings

As shown in the table above, we have six Outperform ratings (14-21% upside from current share prices) and two Neutral ratings. For the coal-fired IPP sector, Huadian and Huaneng are our top picks, as we believe the market has not fully priced in their strong earnings recovery on weakening coal prices. Moreover, given Huadian's high earnings sensitivity to changes in coal price, a higher-than-expected fall in unit fuel cost could result in an even bigger improvement in its earnings. CR Power has the best track record of managing high earnings growth among its peers, even when high coal prices were a concern over the past few years. However, given its high exposure to the coal business, the weak coal price outlook may put a drag on its share price. For the wind IPP sector, we prefer HNR given its diversified wind farm portfolio and strong capacity expansion outlook. However, if the decline in plant utilization is higher-than-expected, it could have a bigger positive effect on DTR's earnings given its high earnings sensitivity to changes in plant utilization. At the current share price level, our target prices for Huaneng, Huadian and HNR suggest 14%, 21%, and 18% upside.

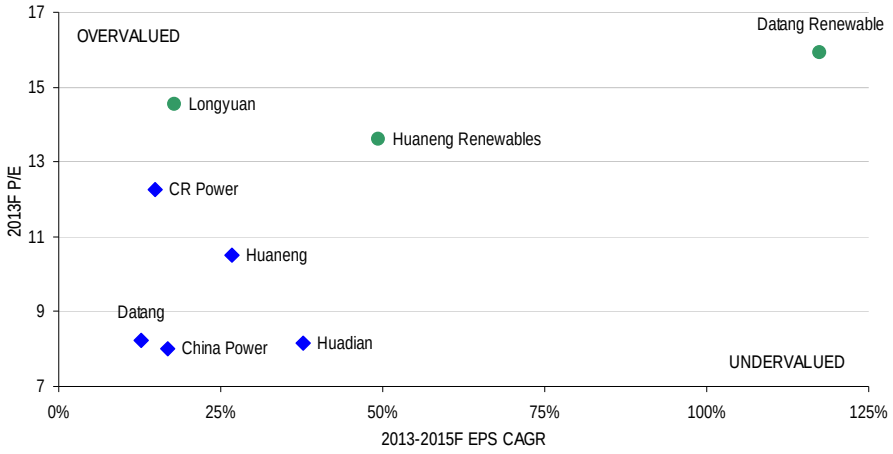
P/E versus EPS CAGR

As shown in the chart below, China's coal-fired IPPs are trading at lower 2013F P/Es than the wind IPPs. Although 2013F-2015F EPS CAGR for wind IPPs looks higher, it is due to their low earnings base in 2012, i.e. earnings for DTR and HNR dropped 85% YoY and 45% YoY, respectively, in 2012.

Among the coal-fired IPPs, we forecast Huadian and Huaneng to have the highest EPS CAGR of 38% and 27%, respectively, for 2013F-2015F. Of these two names, Huadian appears more attractive given it is trading at a low P/E of 8x in 2013F versus 10.5x for Huaneng.

If excluding the low earnings base effect for wind IPPs in 2012 by calculating their two-year EPS CAGR for 2014F-2015F, DTR would see the most substantial growth of 37% versus 21% for HNR and 20% for Longyuan. As a result, DTR deserves to trade at a higher P/E of 16x in 2013F versus 14x for HNR and 15x for Longyuan.

2013F P/E vs. 2013F-2015F EPS CAGR



Source: CCBIS estimates

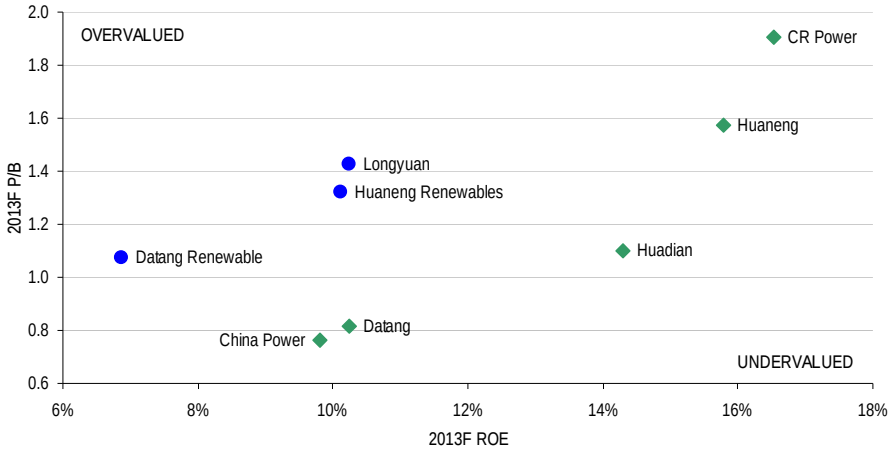
P/BV versus ROE

In the chart below, the coal-fired IPPs look more attractive than the wind IPPs given they are forecast to have higher 2013F ROE (10-17%) but are trading at similar 2013F P/BV (0.8-1.9x) to the wind IPPs.

Within the coal-fired IPP sector, Huadian appears the most attractive given its high 2013F ROE of 14% (versus the sector average of 10%) while trading at a 2013F P/BV discount to the sector average (1.1x versus sector average of 1.4x).

For the wind IPP sector, DTR is trading at a low P/BV of 1.1x, mainly to reflect low ROE of 7% in 2013F. If we compare HNR with Longyuan, HNR appears more attractive as it is trading at a lower 2013F P/BV of 1.3x (versus Longyuan's 1.4x) but has similar ROE of 10% (versus Longyuan's 10%).

2013F P/BV vs. 2013F ROE

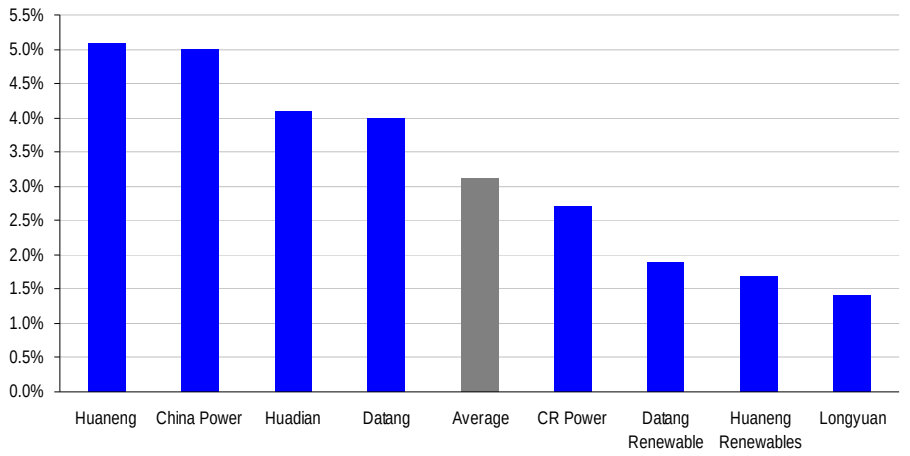


Source: CCBIS estimates

Dividend yield comparison

In the below chart, we rank the dividend yields for coal-fired IPPs and wind IPPs. Due to substantial improvement in the coal-fired IPPs' profitability, most of their dividend payout ratios have returned to the normal level of 33-54% in 2012. With an expectation that their dividend payout ratios to be maintained going forward, we forecast their dividend yield will be in the 3-5% range. For wind IPPs, as their net gearing will remain high in the coming years on huge capex spent for expansion, they should maintain relatively low dividend payout ratios of around 20%. After their recent strong share price performance, their 2013F dividend yield should be lower at 1-2%.

2013F dividend yield comparison



Source: CCBIS estimates

How we differ from consensus

Our conviction BUYs are Huadian and HNR

As shown in the table below, our conviction buys are Huadian (whose 2013F-2015F earnings forecasts are 4-16% above consensus), and HNR (whose 2013F-2015F earnings forecasts are 2-25% above consensus). We believe the market has not fully factored in higher earnings for Huadian on the weakening coal price outlook and strong earnings recovery for HNR on improvement in power grid curtailment.

Our earnings forecasts for Datang are 4% and 10% below consensus for 2014F and 2015F, respectively, mainly due to our conservative assumptions on its coal-to-chemical project's return after its full commissioning in the next two years. For China Power, our earnings estimate for 2013-2015F is 3-5% below consensus. The discrepancy is mainly due to the market over-estimating China Power's hydropower generation in 2013-2015F.

CCBIS's earnings forecasts and ratings versus consensus

	Stock	CCBIS (RMB m)			Consensus (RMB m)			CCBIS vs. consensus (%)			CCBI	Consensus rating		
Company	code	2013F	2014F	2015F	2013F	2014F	2015F	2013F	2014F	2015F	rating	BUY	HOLD	SELL
China coal-fired power														
CR Power	836 HK	9,507	10,126	11,460	9,514	10,442	11,803	0	(3)	(3)	O	26	3	0
Datang	991 HK	4,421	5,010	5,748	4,364	5,162	6,355	1	(4)	(10)	N	9	16	2
Huaneng	902 HK	9,364	10,156	11,094	8,993	9,753	11,523	4	4	(4)	O	20	5	3
Huadian	1071 HK	2,957	3,244	3,904	2,539	2,834	3,761	16	14	4	O	15	7	2
China Power	2380 HK	1,516	1,713	1,967	1,579	1,811	2,024	(4)	(5)	(3)	O	16	4	0
China wind power														
Datang Renewable	1798 HK	617	846	1,155	526	887	1,008	17	(5)	15	O	9	6	4
Huaneng Renewables	958 HK	1,254	1,638	1,838	1,005	1,424	1,803	25	15	2	O	11	5	1
Longyuan	916 HK	3,150	3,747	4,516	3,037	3,829	4,673	4	(2)	(3)	N	17	5	3

Consensus as of 16 April 2013

CCBIS ratings: O = Outperform; N = Neutral

Source: CCBIS estimates

Risks for coal-fired IPPs

Key upside risks:

1. **Further weakness in coal price.** If economic growth remains low, power consumption growth will also be slow, lowering demand for coal. As coal costs account for a significant portion of coal-fired IPPs' total cost (c.70%), lower fuel costs could generate upside to earnings.

2. **Stronger-than-expected utilization recovery.** The government encourages the construction of large-scale high-efficient coal-fired generating units in order to achieve its target of lower energy consumption per unit GDP by 15% in 2011-2015F. If economic growth starts to pick up in 2H2013, it should benefit the listed coal-fired IPPs given large-scale generating units account for a large portion of their installed capacity and should have a higher priority to dispatch electricity compared with small coal-fired generating units.

3. **Weaker-than-expected hydropower power generation.** Coal-fired remained as the major source of power generation in 2012, accounting for 79% of the total, followed by hydropower's 17% and other renewables' 4%. We see any worsening in water inflow dampening hydropower generation. It could increase reliance on coal-fired power generation.

4. **Stronger-than-expected synergy from coal-related business.** Most coal-fired IPPs are striving to evolve into fully integrated businesses, looking to develop coal mines, coal-to-chemical projects, and coal-to-gas projects as new growth drivers. We believe any acceleration in segment consolidation could create earlier-than-expected earnings.

5. **Re-ignition of power system reform a positive.** If the government were to re-ignite power system reform, it would potentially include the formulation of power transmission and distribution costs. We believe profit margins of coal-fired IPPs would benefit as a result of a more sophisticated cost pass-through mechanism.

Key downside risks:

1. **A sharp surge in coal price.** We expect average thermal coal price for full-year 2013 to remain at a similar level to what it was at end-4Q12 (RMB625/tonne for 5,500kCal VAT-inclusive). Any unexpected reduction in coal import or inventory would likely foster a short-term rebound in the coal spot price and hence squeeze gross margin of the coal-fired electricity generators.

2. **Higher-than-expected borrowing costs.** Coal-fired IPPs are likely to stay at their high gearing positions in the coming years owing to continuous capacity expansion that would incur large capex. If any substantial interest rate hikes occur in 2H13F, net earnings would be hurt.

3. **Worse-than-expected power demand.** We currently forecast a 7% power consumption growth for China in 2013. Any further slowdown in growth in power-intensive industries such as steel and cement, would reduce power plant utilization and undermine the profitability of coal-fired IPPs.

Risks for wind IPPs

Key upside risks include:

1. **Better-than-expected wind resources and power grid curtailment improvement.** Both wind resources and power grid curtailment have shown improvement in early 2013 and hence lifting wind IPPs' generating growth substantially in 1Q13. Should the pace of improvements in a stronger-than-expected magnitude, wind power generation would likely post better-than-expected earnings.

2. **A rebound in CER prices and hence driving stronger-than-expected CDM income.** As CER pricing hits its historical low in late 2012, there could exist potential upside on a price rebound if the Kyoto Protocol succession is to be realized in 2013 after several rounds of negotiations.

3. **Better-than-expected cash flow improvement.** During 2012, delays in government's tariff payments to wind IPPs were apparent. However, the receivable situation improved in 1Q13 and contributed a positive cash inflow for the operators. If improvement in receivables collection continues, we expect wind farm operators to enjoy better cash positions for their working capital and/or capex spending for the year.

4. **Acceleration of offshore wind farm installation in China**. Given the abundance of offshore wind resources, development of offshore wind farms is on the rise. The wind players are expected to benefit if any break-through in large-scale wind turbine R&D takes place, as it could lower both turbine production and procurement costs for turbine makers, and hence, wind power equipment for wind farm operators.

Key downside risks include:

1. **Slower-than-expected capacity expansion if power grid curtailment remains challenging.** Provinces in northeastern China and Inner Mongolia have seen the highest percentage of power curtailment (17-34%) in 2012. With the favorable industry policies and continuous grid infrastructure enhancements, we expect the power grid bottleneck to loosen gradually over the next three years. Yet, if the power curtailment situation improves at a slower-than-expected rate, we believe wind farm operators are likely to curb their pace of capacity additions.

2. **Higher-than-expected borrowing costs.** Wind IPPs are highly geared and would incur further capex for planned capacity expansion. For this reason, we believe any unexpected substantial interest rate hikes in 2H13F would erode the bottom-line earnings of the wind farm operators.

3. **Worse-than-expected power demand.** We forecast a 7% YoY recovery in power demand for 2013F on the back of a 8.0% GDP growth expected for China, according to our economist, Dr. Eliza Liu. Should power demand fall short of our estimates, wind power sales from wind IPPs would likely tumble.

4. **Delays in the construction of China's ultra-high voltage (UHV) transmission lines.** The State Grid plans to invest over RMB3t in a national transmission network build-out by 2020F to facilitate the transmission of clean energy generation and consumption across China. If construction progress is slower than we expect, it could affect the construction of wind farms in remote areas of the country.

Positive earnings growth outlook

Overall, we forecast high earnings growth for both coal-fired IPPs and wind-IPPs in 2013F, as both will benefit. The former from the decline in unit fuel cost, and the latter from improvements in power grid curtailment. Due to substantial earnings declines for HNR and DTR in 2012 (each fell 46-85% YoY), our forecast of 125-450% earnings growth in 2013F is in large part also due to the low earnings base effect from 2012.

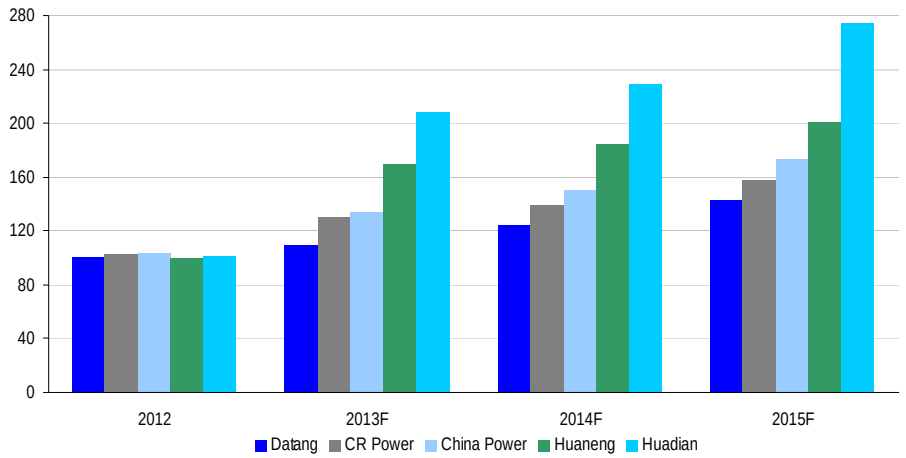
Coal-fired IPPs: EPS CAGR of 13-38% in 2013F-2015F

We assume coal-fired unit fuel cost of the coal-fired IPPs will drop 5-6% in 2013F, remain flat in 2014F, and the increase 2-4% in 2015F. To reflect the weak coal price outlook, we assume no tariff hikes in 2013F-2014F. As power demand in China is expected to remain weak in near term, we assume the average plant utilization of the coal-fired IPPs will drop 2% in 2013F and stay flat in 2014F. After taking into account planned capacity expansion in the coming years, we forecast the earnings of the coal-fired IPPs will increase 9-104% in 2013F, 7-13% in 2014F and 9-20% in 2015F, translating to three-year EPS CAGR of 13-38%.

Huadian and Huaneng should have the highest three-year EPS CAGR of 38% and 27% given their high leverage on coal price weakness

Within the sector, we forecast the highest three-year EPS CAGR for Huadian (38%) and Huaneng (27%) given their wide exposure to the coal-fired power business, which stands to benefit greatly from weaker coal prices. CR Power has the best track record of maintaining high earnings growth over the past few years, especially during the time when high coal price was a concern. However, due to its high earnings base last year and its wide exposure to the coal business, we forecast its EPS CAGR at 15% for 2013F-2015F. Due to China Power's high exposure to the hydropower business, which contributed nearly half of its operating profit in 2012, any decline in coal price would benefit the company to a lesser degree. In the case of Datang Power, we believe the commissioning of the coal-to-chemical business is still a concern as it will significantly increase the company's depreciation and interest expenses. For this reason we are forecasting a lower EPS CAGR of 13% for the firm in 2013F-2015F.

Coal-fired IPPs – earnings comparison (rebased to 100 in 2012)



Source: CEIC, CCBIS research

Earnings sensitivity

Huadian's earnings are the most sensitive to changes in key earnings drivers due to its low profit margin

The table below shows the earnings sensitivities of coal-fired IPPs to their key earnings drivers, i.e. tariffs, fuel costs, power plant utilisation and cost of debt. As the operating margin of Huadian is the lowest in the sector (15% versus 16-22% for peers in 2013F), its earnings are the most sensitive to changes in the key earnings drivers. Currently, we are assuming that the unit fuel cost for the coal-fired IPPs drop 5-6% in 2013F. If the decline in unit fuel cost is higher than our forecast, Huadian should have the highest earnings upgrade. A 1% higher-than-expected unit fuel cost decline would lift our earnings estimate for Huadian by 8% versus 3-5% for peers. On the other hand, given its high net gearings (389% in 2013F versus 109-329% for peers), a 25bp higher-than-expected interest rate hike could impact our 2013F earnings estimate by 5% versus 2-4% for peers.

Coal-fired IPPs – earnings sensitivity to key drivers

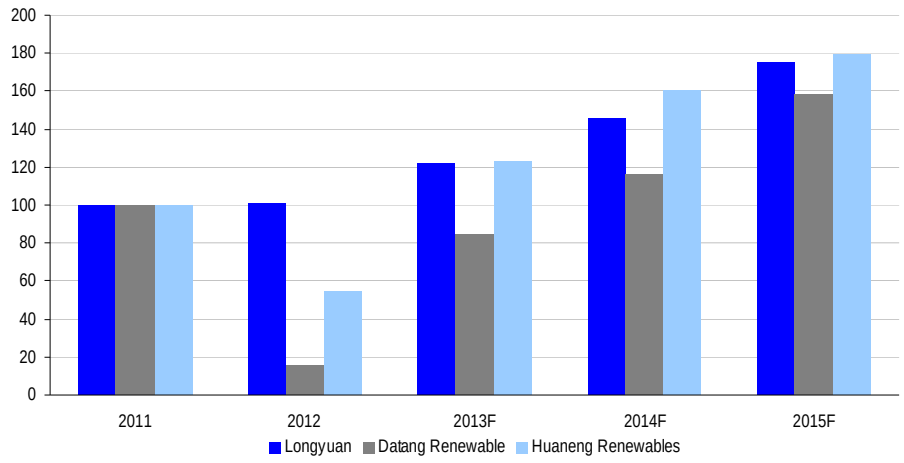
	Amount	Impact on 2013F earnings (%)				
Key drivers	change	China Power	CR Power	Datang	Huadian	Huaneng
Growth in average tariff	+/- 1	-/+ 10.0	+/- 5.4	+/- 8.4	+/- 13.1	+/- 8.2
Growth in unit fuel cost	+/- 1	-/+ 5.1	-/+ 3.2	-/+ 4.6	-/+ 8.1	-/+ 5.0
Average plant utilization	+/- 1	+/- 7.7	+/- 4.1	+/- 6.1	+/- 8.2	+/- 5.0
Interest rate	+/- 25bps	-/+ 4.2	-/+ 1.6	-/+ 4.4	-/+ 5.2	-/+ 3.0

Source: CCBIS estimates

Wind IPPs: EPS CAGR of 18-118% in 2013-2015F

After factoring in 800MW-2,000MW capacity expansion for the wind IPPs in 2013F-2015F and assuming their average plant utilization will improve 3-12% in 2013F and 1-6% in 2014F, we forecast their earnings will increase 22-450% in 2013F, 19-37% in 2014F and 12-37% in 2015F, translating to three-year EPS CAGR of 18-118%. Amongst the wind IPPs, we forecast DTR will have the highest three-year EPS CAGR of 118% due to its low earnings base in 2012. Further, we believe that its average plant utilization will enjoy a stronger rebound than peers due to its high exposure to Inner Mongolia and northeastern China. Given Longyuan's high 2012 earnings base and involvement in non-wind power business, its earnings growth should be the lowest in the sector.

Wind IPPs – earnings comparison (rebased to 100 in 2011)



Source: CEIC, CCBIS research

Earnings sensitivity

Due to DTR's low profit margin, it has the highest earnings sensitivity to key drivers

Due to DTR's low profit margin for the wind power business, it has the highest earnings sensitivity to several key drivers. We estimate that every 1.0% change in our wind power utilization assumptions would change our 2013F earnings forecast for DTR by 5.4% versus 2.5% for Longyuan and 3.8% for HNR. Moreover, given DTR's high net gearing (344% versus 153% for Longyuan and 228% for HNR), a 25bp higher-than-expected interest rate hike could impact our 2013F earnings estimate by 8.5% versus 3.0% for Longyuan and 4.4% for HNR.

Wind IPPs – earnings sensitivity to key drivers

	Amount	Impact on 2013F earnings (%)		
Key drivers	change	Longyuan	Huaneng Renewables	Datang Renewable
Wind				
Change in average tariff	+/- 1	+/- 2.5	+/- 4.0	+/- 6.0
Change in plant utilization	+/- 1	+/- 2.5	+/- 3.8	+/- 5.4
Change in CDM income	+/- 10	+/- 0.2	+/- 0.3	+/- 0.6
Change in cost of debt	+/- 25bps	-/+ 3.0	-/+ 4.4	-/+ 8.5
Coal-fired				
Change in average tariff	+/- 1	+/- 1.0		
Change in unit coal cost	+/- 1	-/+ 0.6		
Change in plant utilization	+/- 1	+/- 0.4		

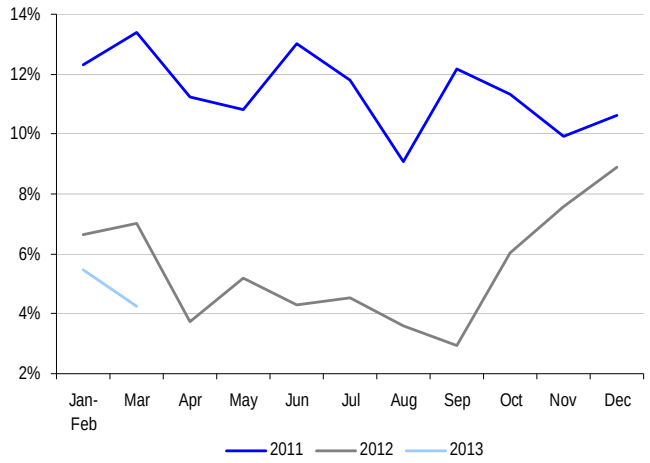
Source: CCBIS estimates

Electricity supply to match demand

Low GDP growth affects electricity consumption in 1Q13

March 2013 electricity statistics indicate that electricity consumption growth declined from +5.5% YoY in January-February 2013 to +1.9% YoY. Electricity sales to the manufacturing industry accounted for 72% of total electricity sales. The slowdown in electricity consumption growth was dragged mainly by a slowdown in industrial activity, with industrial production growth falling from +12.3% YoY in January-February 2013 to +8.9% YoY in March 2013.

Monthly power consumption growth



Source: CCBIS estimates, Bloomberg

Power consumption growth by industry in 1Q13

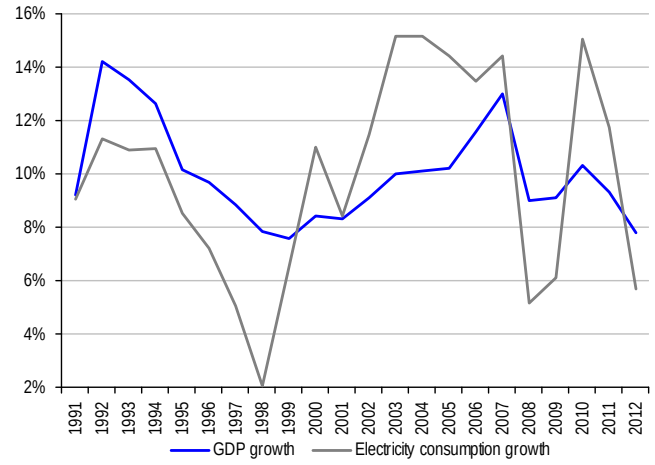
Sector	2M13 (TWh)	*YoY change (%)*	3M13 (TWh)	*YoY change (%)*	% of total
Residential	117	*4.7*	174	*3.1*	14.3
Industries:					
Primary (agriculture)	13	*4.3*	19	*(0.3)*	1.6
Secondary (manufacturing)	553	*4.2*	869	*3.8*	71.6
Tertiary (service)	107	*13.8*	153	*9.2*	12.6
	672	*4.2*	1,040	*3.8*	85.7
Total	789	*5.5*	1,214	*4.3*	100.0

Source: CCBIS estimates, Bloomberg

Electricity consumption growth/GDP growth to improve gradually

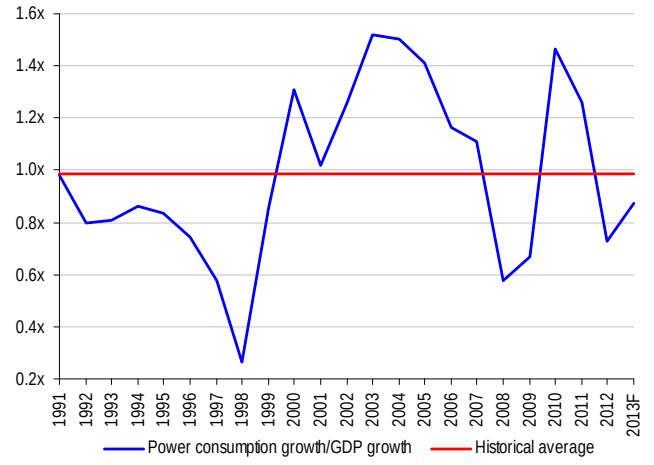
Given that manufacturing industries account for the largest part of electricity consumption and due to the cyclical nature of industry, electricity consumption growth should increase faster than GDP growth when the economy hits the up-cycle as in 2000-2007 and 2010-2011. On the other, if the economy is on a down-cycle, electricity consumption growth should slow faster than GDP growth as in 1992-1999 and 2008-2009. For the period 1991-2012, we calculate the average value of the multiple of electricity consumption growth-to-GDP growth at 1.0x. If we divide this into the periods of accelerating economic growth and slowing economic growth, the average multiples worked out to 1.29x in 2000-2007 and 1.36x in 2010-2011 when GDP growth was increasing, and 0.72x in 1992-1999 and 0.62x in 2008-2009 when GDP growth was slowing.

Electricity consumption vs. GDP growth (1991-2012)



Source: CCBIS estimates, Bloomberg

Electricity consumption growth/GDP growth



Source: CCBIS estimates, Bloomberg

We forecast 2013F GDP growth at 8%

Recently disclosed economic statistics show that GDP growth in China was lower-than-expected at 7.7% YoY. The disappointment was attributable to a deceleration in property investment, weak industrial production and retail sales. Despite this, our economist, Dr. Eliza Liu, maintains her 2013 GDP growth forecast at 8% basing it on strengthening FAI and industrial production in 2Q13F.

The multiple of electricity consumption growth-to-GDP growth increases to 0.88x in 2013F. We forecast electricity consumption growth at 7% for 2013F

China's monetary policy for 1H13F is turning from moderately loose to neutral, entailing a slightly more conservative 2013F M2 growth target for China of 13% YoY versus last year's goal of 14%. With this in; mind, we do not expect industrial activity to pick up significantly in 2H13F. Therefore, we conservatively forecast the multiple of electricity consumption growth-to-GDP growth to increase gradually from 0.73x in 2012 to 0.88x in 2013F and then to 1.0x in 2014F, translating to electricity consumption growth of 7% in 2013F and 7.8% in 2014F. Compared with the 2013F electricity consumption forecast (7-9%) released by the State Grid Energy Research Institute, our forecast is fairly low.

China's electricity forecasts (2010-2015F)

	2010	2011	2012	2013F	2014F	2015F
GDP growth (%)	10.3	9.3	7.8	8.0	7.8	7.8
Electricity consumption (TWh)	4,192	4,693	4,959	5,306	5,720	6,166
Electricity consumption growth (%)	15.1	11.9	5.7	7.0	7.8	7.8
Electricity consumption growth/GDP growth	1.46	1.28	0.73	0.88	1.00	1.00
Installed capacity (GW)	962	1,056	1,145	1,224	1,322	1,428
% change	*10.1*	*9.7*	*8.4*	*6.9*	*8.0*	*8.0*
Net increase (GW)	88	94	89	79	98	106
Average utilization hours	4,660	4,731	4,572	4,576	4,568	4,559
% change	*2.9*	*1.5*	*(3.4)*	*0.1*	*(0.2)*	*(0.2)*
Average utilization rate (%)	53.2	54.3	52.9	52.9	52.8	52.7

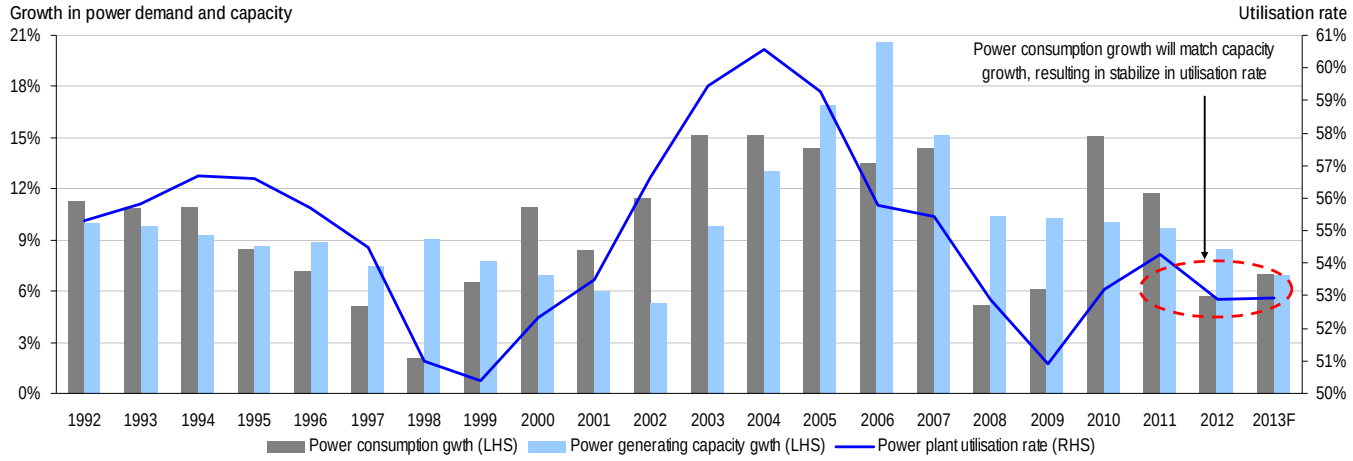
Source: CEIC, CEC, CCBIS research

Average plant utilization could stabilize

Newly installed capacity will fall to 79GW in 2013F

The low profitability for coal-fired IPPs in 2011-2012 caused them to scale down their capacity expansion plans. Bearing in mind it takes one-to-two years to construct a power plant, newly added capacity for 2013F should be lower than it was in 2012. According to the forecast by the State Grid Energy Research Institute, newly added capacity for 2013F will decline from 89GW in 2012 to 79GW. As growth in installed capacity (+6.9%) is forecast to reach a similar level to electricity consumption growth in 2013F, average power plant utilization in China is likely to remain flat.

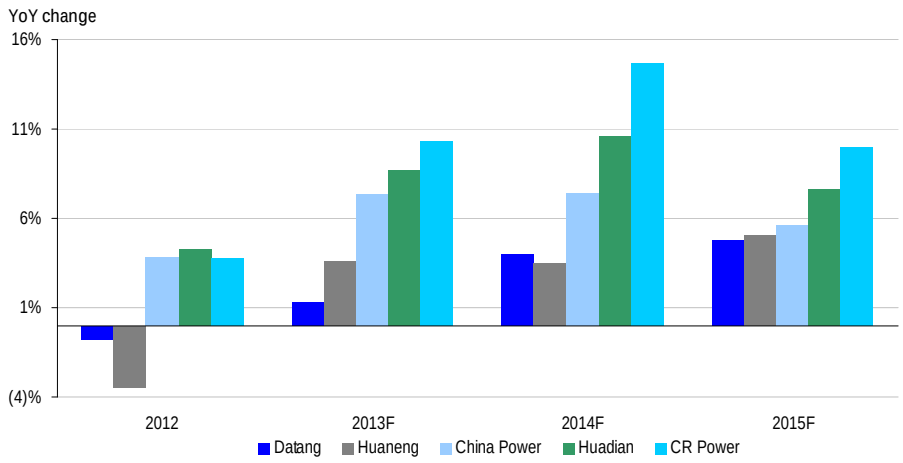
Power plant utilization vs. power demand growth and growth in power generating capacity



Source: CCBIS estimates, Bloomberg

In 1Q13, utilization for hydropower generation increased 16% YoY. As hydropower has a higher priority to dispatch electricity to the power grid, average utilization for coal-fired power fell 7% YoY in 1Q13. Given the expectation that hydropower generation will maintain modest growth in 2013F, we forecast average utilization for coal-fired power will drop around 2% YoY for the year. Taking into account the planned expansion by coal-fired IPPs, we forecast growth in power generation will pick up in 2013F.

On-grid power generation growth comparison



Source: CEIC, CCBIS research

Weaken coal price to continue

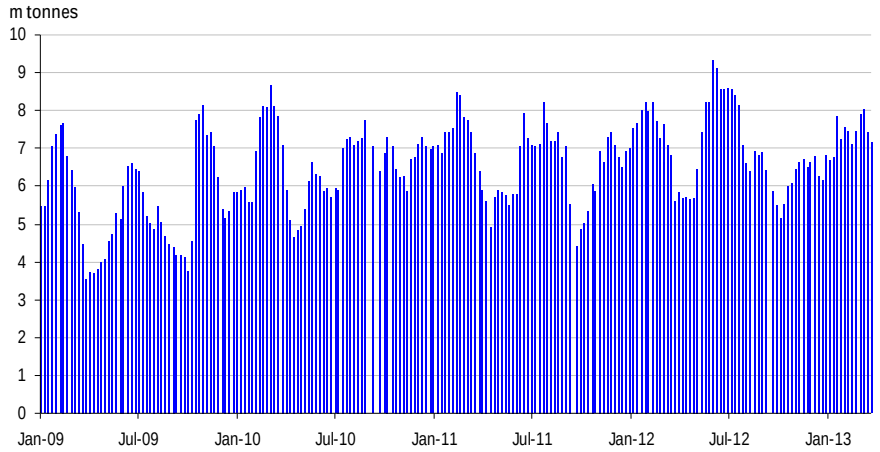
Spot price continues to face downtrend pressure for 2013

A large number of coal-fired power plants have been loss-making in the past few years given the government's regulated on-grid tariff as well as exposure to rising spot coal prices. To ensure adequate incentive to deliver stable power supply, China's authorities are pressing on with coal market reforms intended to liberalize and synchronize contract-to-spot coal prices. If realized, this initiative would have the effect of narrowing the profit gap between coal miners and power generators.

Earlier in 1Q13, one of China's key coal suppliers, Shenhua Energy, stated that it had started a new pricing mechanism that links mid-to-long term contract prices to the floating Bohai Rim Steam Coal Price Index (BSPI) at a fixed discount of RMB10/tonne, with the remainder of contracts benchmarked directly against the spot BSPI price adjusted on a weekly basis. We believe that measures such as this taken by the coal miners and coal-fired IPPs would serve to modulate the latter's fuel costs, and thereby improve inventory management and earnings visibility in the long term.

China's inventory of thermal coal has been piling up slowly since the beginning of the year. It is now up 610k tonnes YTD (or 9.7%) to 6.9m tonnes, slightly higher than the past three-year historical average of 6.75m tonnes. Marginal growth in 1Q13 power demand (+2.1%YoY) suggests weaker-than-expected demand for thermal coal, partly evidenced by a 2.4% decline in QHD domestic thermal coal pricing for 5,500kCal thermal coal from RMB625/tonne in December 2012 to RMB610/tonne as at 15 April 2013. Going forward into 2Q13F, although a temporary support in pricing could be seen in April owing to the routine maintenance of Daqin rail, we believe spot prices will continue to be fragile given weak power demand until such time as power generating activity picks up in 2H13F.

Spot coal inventory in China

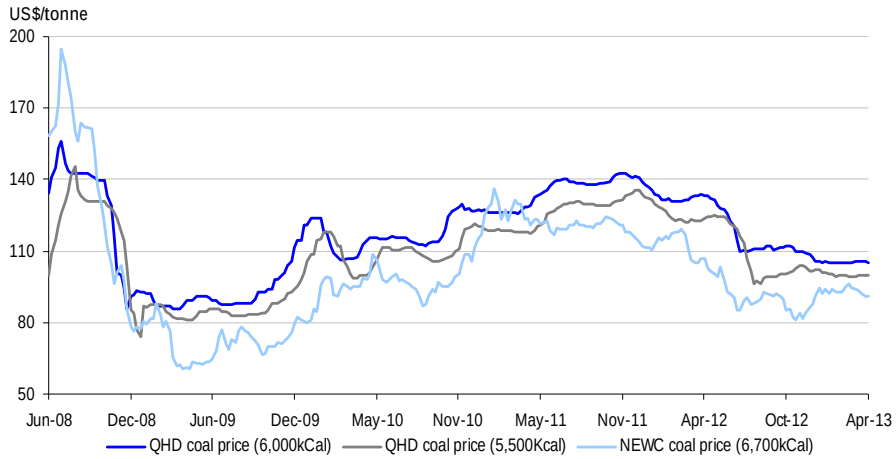


Source: CEIC, CCBIS research

Price pressure from import coal and RMB appreciation

The domestic QHD 5,500kCal thermal coal spot price surpassed the price of New Castle 6,700kCal thermal coal some time around the end of September 2008, after taking into account the effect of appreciation of the renminbi against the US dollar. The spot price premium for domestic coal has increased from US$1.7/tonne in 2008 to US$7.7/tonne now. This places increasing pressure on QHD thermal coal demand. As we expect the renminbi to continue to appreciate by 1-2% against US dollar over the medium term, demand for import coal will remain solid, making a sharp rebound in domestic coal price unlikely in 2H13F.

QHD coal price trend, VAT-inclusive



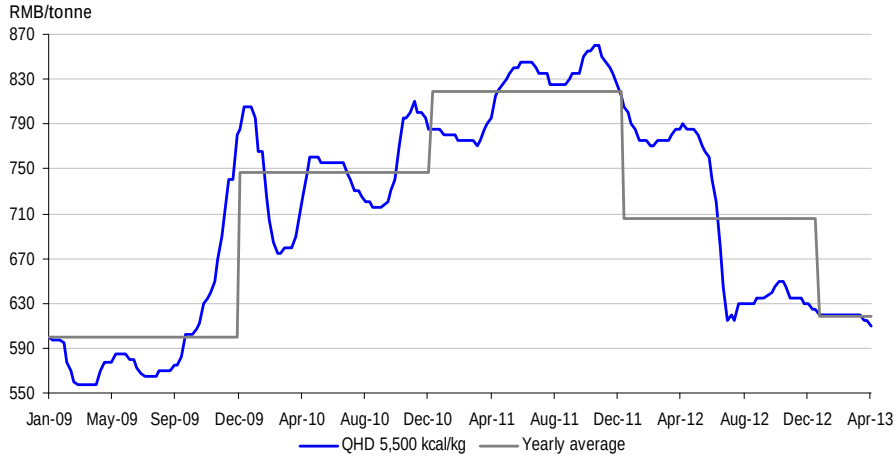
Source: CEIC, CCBIS research

Margin to expand from coal-fired IPPs

We forecast coal-fired IPPs' unit fuel cost will drop 5-6% in 2013F, resulting in a 1.7-3.4ppt expansion in operating margin

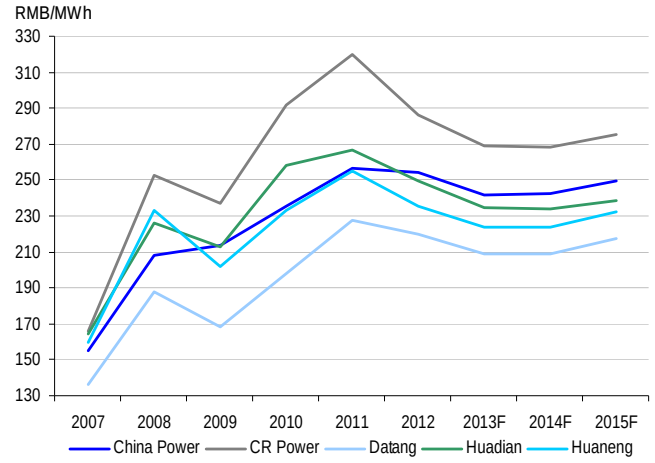
In our view, the spot coal price will continue to hover around its current level in 2Q13F-4Q13F. Prices will not dip below the cost level; however, they will show a slight decline towards the end of 2013F. Assuming the spot coal price stays at the current level until the end of 2013F, average spot coal price for the year will fall 13% YoY. Taking into account the modest price increase in coal-fired IPP contract coal supply, we forecast unit fuel cost for the coal-fired IPPs will decline by an average of 5-6% in 2013F, resulting in a 1.7-3.4ppt expansion in operating margin.

China spot thermal coal price



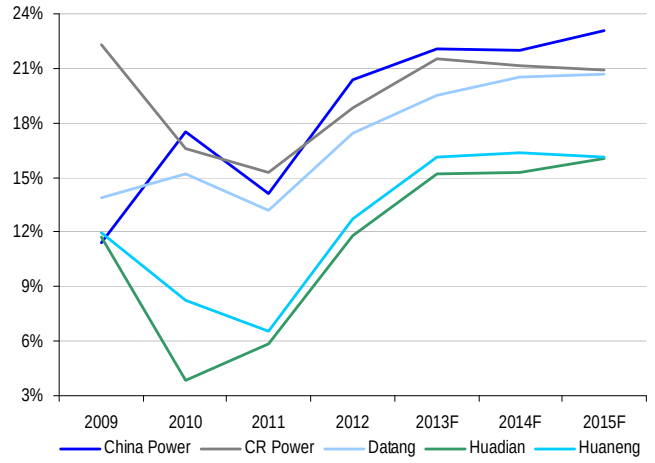
Source: CEIC, CCBIS research

Fuel cost per generation comparison



Source: CCBIS estimates

Operating margin comparison



Source: CCBIS estimates

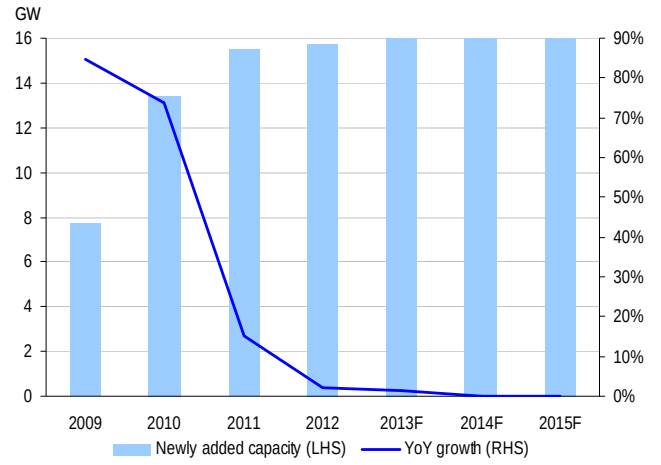
Improving grid curtailment to maintain capacity expansion

Newly added wind power capacity to remain at 16GW p.a. in 2013F-2015F

Before the completion of the UHV transmission networks and smart grid distribution networks in 2014-2015F, power grid connections represented a bottleneck for wind power development. In order to improve the percentage of wind power capacity connected to power grids, the government implemented measures requiring approvals for new capacity beginning in 2011. Since then, all new wind power projects first need to obtain approval from the central government. Since 2011, the National Energy Administration (NEA) has proposed three batches of wind farm projects totaling 84.3GW for development under the 12th Five-year Plan. However, given the overhang of power grid curtailment, more than half of these wind farm projects have not yet been tendered or even begun construction. Until such time as power grid curtailment is resolved, we do not expect any acceleration in wind power development to occur.

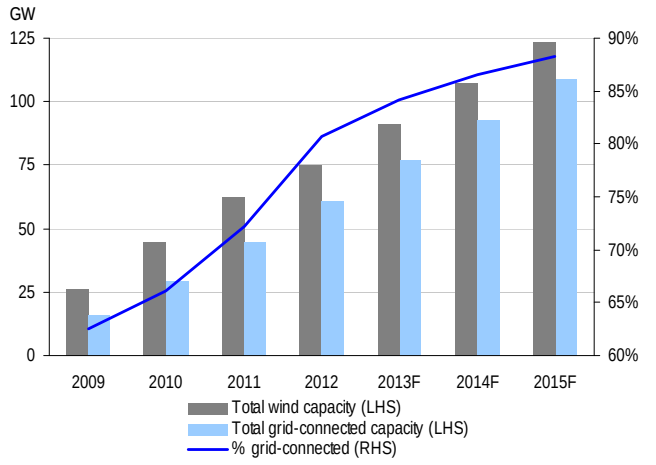
In 2013F-2015F, we expect newly added wind power capacity with grid connection per year to maintain at 16GW the same level as installed wind power capacity per year. As a result, the percentage of wind farms connected to power grids should continue to increase from 81% in 2012 to 88% in 2015F.

Newly added wind power capacity p.a. (with grid connection)



Source: CCBIS estimates

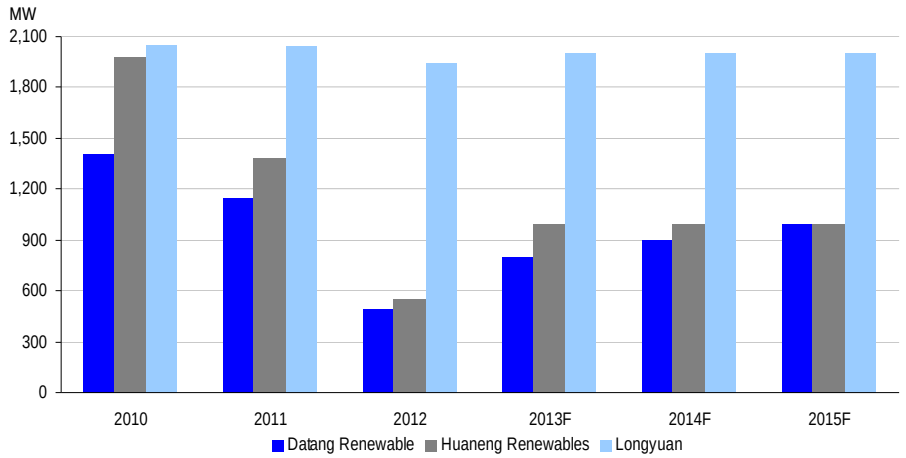
Total wind power capacity (with grid connection) (GW)



Source: CCBIS estimates

Wind IPPs expect power grid curtailment to improve substantially in Inner Mongolia and northeastern China in 2013F. One of the reasons is that the increase in cross-regional electricity transmission from northeastern China to northern China (4b kWh of electricity in total for 2013F). As a result, their capacity addition targets for 2013F are higher than the capacity added in 2012. For 2013F, HNR and DTR plan to add 1GW and over 800MW in wind power capacity, which is higher the 554MW and 497MW wind power capacity added in 2012. As Longyuan's wind power capacity added in 2012 was maintained at a similar level of 2GW as in 2011, management targets adding 1.6-2.0GW in wind power capacity in 2013F.

Wind-IPPs – newly added wind power capacity per year (2010-2015F)



Source: CCBIS estimates

Relief of grid bottleneck provides potential upside to utilization

As at end-2012, total wind power capacity with grid connections was 60GW. Of this, one-third of the capacity was located in Inner Mongolia, followed by northeastern China (23%) and northern China (19%), mainly due to the rich wind resources in these regions. But as these areas are also highly affected by power grid curtailment, the listed wind IPPs have shifted their focus to add capacity in southeastern coastal areas, recognizing that those areas have well-developed power grid infrastructure. Thus, they have no grid bottleneck issues and as an added bonus, offer higher wind power tariffs.

DTR has the highest percentage of wind farms in Inner Mongolia and northeastern China, i.e. 65% of its wind power capacity vs. 52% for HNR and 44% for Longyuan

In 2012, DTR, HNR and Longyuan shifted their focus to China's southeastern coastal areas; however, the proportion of newly installed capacity in Inner Mongolia and northeastern China still accounted for 50% of DTR's total capacity added in 2012 versus only 9% for HNR and 21% for Longyuan. As at end-2012, DTR had the largest percentage of wind farms in Inner Mongolia and northeastern China, amounting to 65% of its wind power capacity versus 52% for HNR and 44% for Longyuan. As impacted by power grid curtailment, average plant utilization for DTR, HNR and Longyuan dropped -10.2%, -9.6% and -2.0%, respectively.

Wind power portfolio

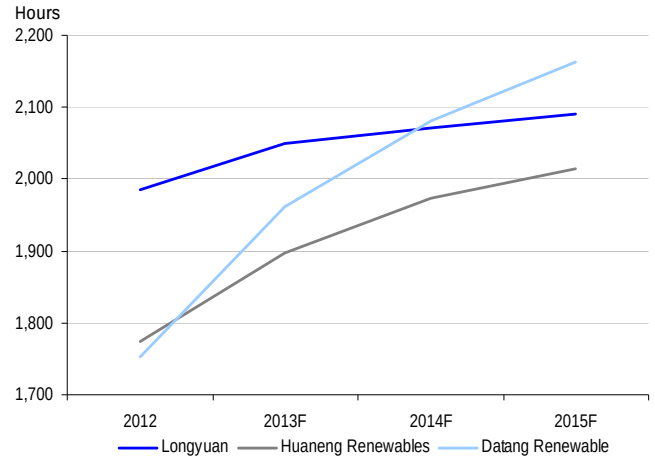
	Huaneng Renewables		Datang Renewable		Longyuan	
end-December 2012	MW	% of total	MW	% of total	MW	% of total
Three northeast provinces	1,148	21	1,275	22	2,452	23
Inner Mongolia	1,716	31	2,458	43	2,176	21
Southeast coastal provinces	282	5	50	1	1,675	16
Gansu	–	0	394	7	1,039	10
Xinjiang	272	5	–	0	744	7
Hebei	249	5	50	1	971	9
Other	1,791	33	1,443	25	1,487	14
	5,458	100	5,669	100	10,544	100

Source: Company data, CCBIS research

We forecast DTR's average plant utilization to increase 12% in 2013F

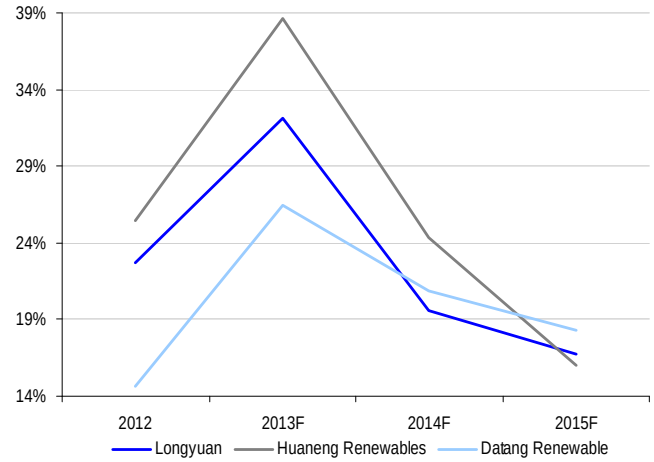
Should power grid curtailment live up to expectations and gradually lift in 2013F, especially in Inner Mongolia and northeastern China, it would benefit DTR the most. We forecast average plant utilization for DTR, HNR and Longyuan would increase 12%, 7% and 3%, respectively. As noted in the 1Q13 power generation statistics for the wind IPPs, wind power generation increased substantially for HNR (+65% YoY), DTR (>40% YoY growth) and Longyuan (+33% YoY).

Average wind power utilization comparison (2012-2015F)



Source: CCBIS estimates

Wind power generation growth (2012-2015F)



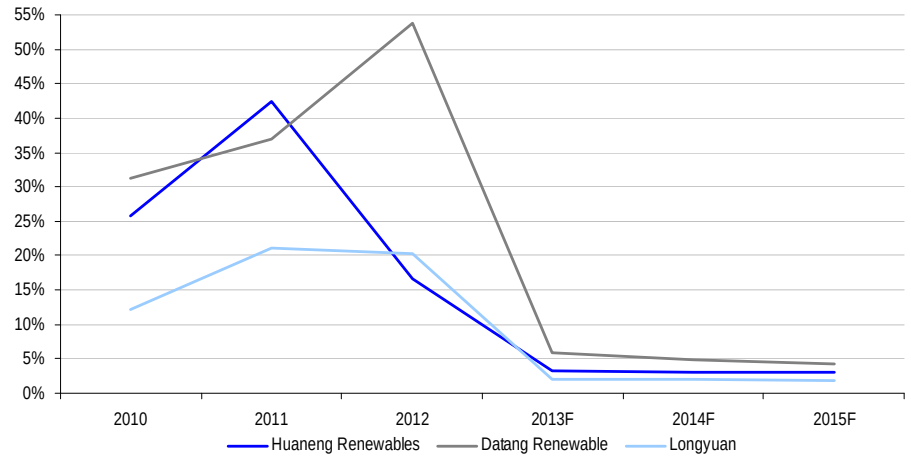
Source: CCBIS estimates

Diminishing concerns over CDM income cancellation

We forecast CDM income to pre-tax profits for the wind IPPs will decline to 2-6% in 2013F

Uncertainly on CER price has been a concern for wind IPPs over the past two years given the CDM income contributed over 20% of their pre-tax profits before 2012. However, in view of the expiry of the Kyoto Protocol in 2012 and the slump in CER price (-96% YoY to EUR0.18/tonne at end-2012), we forecast the percentage of CDM income to pre-tax profit will decline to 2-6% in 2013F with the consequent impact to earnings appearing rather insignificant in the coming years.

Percentage of CDM income to pre-tax profit comparison



Source: CCBIS estimates

China Power International (2380 HK)

Hydro exposure mitigates coal price risk

- **Initiate on China Power International with a Neutral rating.** Our DCF-based target price of HK$3.20 suggests 16% potential upside. In terms of 2013F P/E valuation, the stock is trading at 8x, which looks attractive in view of its three-year average of 11x and high EPS CAGR of 17%.
- **Capacity expansion to continue.** Based on China Power's pipeline of projects under construction, around 4.5GW capacity will commence operations in 2013-2014F, increasing the company's attributable capacity from 11.7GW at end-2012 to 14.3GW by 2014F. As the company has 5.5GW power projects in their preliminary development stage, we see potential upside to our earnings forecasts provided the company receives government approvals in the near term.
- **Declines in unit fuel cost.** Management forecasts a 5-8% decline in unit fuel cost, which is higher than peers forecasting a 5% decline. The lag in the coal price declines in China's inner provinces accounts for the discrepancy. As China Power does not have a good track record of controlling its coal costs, we have conservatively assumed its unit fuel cost will drop 5% in 2013F.
- **Less exposed to declines in coal price.** Thanks to the company's expansion into the hydropower business in 2009, it has the highest exposure to hydropower in the sector (c.50% of operating profit). Assuming weak coal prices in the next twelve months, a higher-than-expected decline in coal price would have lower impact on earnings than peers.

Forecasts and valuation

Year to 31 December	2011	2012	2013F	2014F	2015F
Revenue (RMB m)	16,082	17,497	18,976	20,412	21,788
Operating profit (RMB m)	2,273	3,560	4,193	4,492	5,026
Operating margin (%)	14.1	20.3	22.1	22.0	23.1
Net profit (RMB m)	505	1,181	1,516	1,713	1,967
EPS (HK$)	0.12	0.28	0.34	0.39	0.44
YoY change (%)	(20.5)	128.9	22.9	13.0	14.6
P/E (x)	22.5	9.8	8.0	7.1	6.2
Dividend yield (%)	2.0	4.1	5.0	5.6	6.5
Price/book value (x)	0.9	0.8	0.8	0.7	0.7
ROE (%)	4.0	8.4	9.8	10.4	11.1
Net gearing (%)	247	227	231	214	187

Source: Company data, CCBIS estimates

Company Rating: Outperform
(initiation)

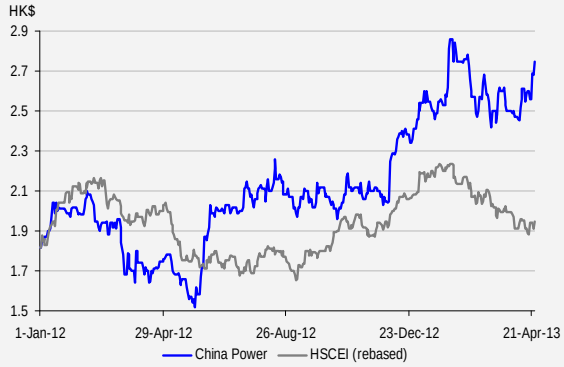
Price: HK$2.75
Target: HK$3.20
(initiation)

Trading data

52-week range	HK$1.52-2.91
Market capitalization (b)	HK$15.4/US$2.0
Shares outstanding (m)	5,550
Free float (%)	36
3M average daily T/O (m share)	12.5
3M average daily T/O (US$m)	4.3
Expected return – 1 year (%)	16

Price as at close on 24 April 2013

Stock price and HSCEI



Source: Bloomberg

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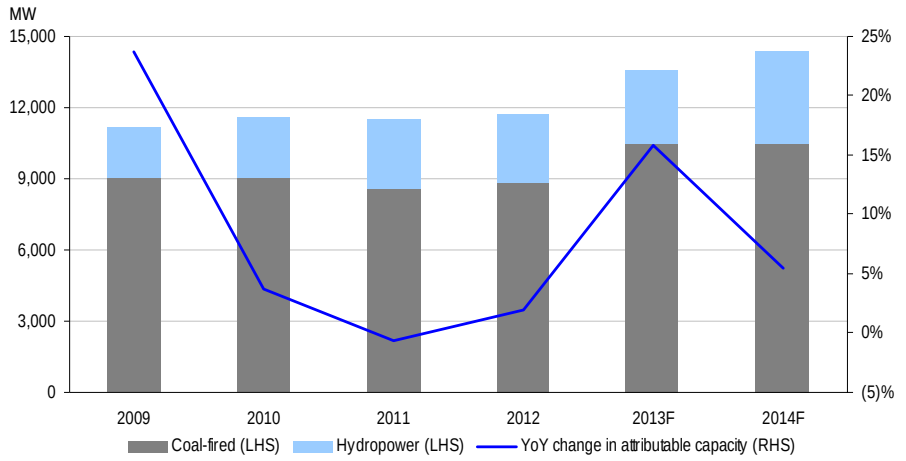
Hydropower exposure mitigates coal price risk

Capacity expansion to continue

Capacity to increase from 11.7GW in 2012 to 14.3GW in 2014F

As at end-2012, China Power had an attributable capacity of 11.7GW, mainly composed of 8.8GW of coal-fired power and 2.9GW of hydropower. Based on the company's pipeline of projects under construction, around 4.5GW of capacity will come into effect in 2013F-2014F, increasing China Power's attributable capacity to 14.3GW by 2014F.

China Power – attributable capacity forecast

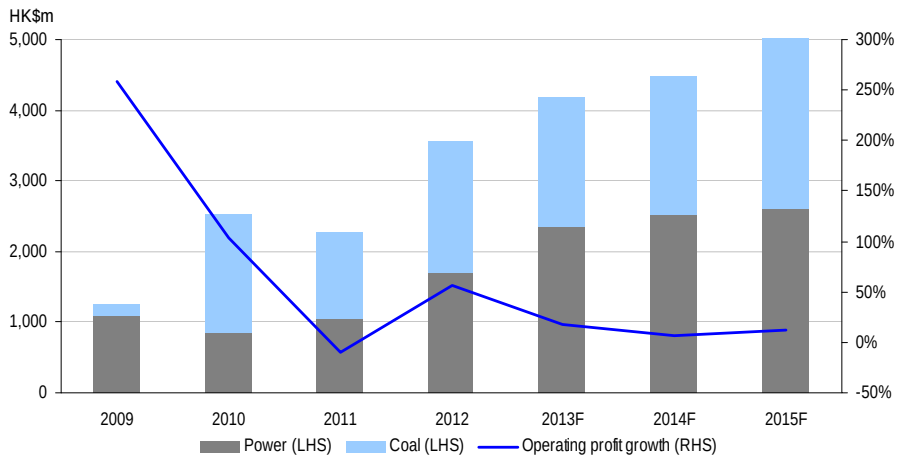


Source: Company data, CCBIS research

Lower earnings impact should coal price exhibit a higher-than-expected decline

The company expanded into the hydropower business in 2009 and by 2012 hydropower accounted for nearly half of its operating profit. In 2010, China Power managed to maintain earnings growth despite higher unit fuel costs in the year. Other coal-fired IPPs suffered 8-85% YoY earnings declines. However, given the expectation that coal prices will remain weak over the next twelve months, a higher-than-expected decline in coal price would have lower impact to China Power's earnings relative to the rest of the sector.

China Power – operating profit breakdown



Source: Company data, CCBIS research

We only take into account projects once government approvals have been granted. As 5,450MW capacity is pending government approval, there is potential upside to our capacity forecast

China Power has over 5,450MW power projects in the preliminary development stage defined as being projects for which government approvals have been applied for but not yet granted. Of these projects, 5,200MW are coal-fired power projects with large-scale generating units and over 250MW are small- to medium-sized hydropower projects mainly located in Sichuan and Hunan. We factor in these projects only after government approvals are obtained. Thus, there is potential upside to our earnings forecasts.

China Power – power projects pending government approval

Power plant	Location	Capacity (MW)
Pingwei III*	Anhui	2x1,000
Shentou**	Shanxi	2x1,000
Pu'an	Guizhou	2x600
Hydropower projects	Sichuan, Hunan	250
		5,450

** Expansion of Pingwei Power Plan*

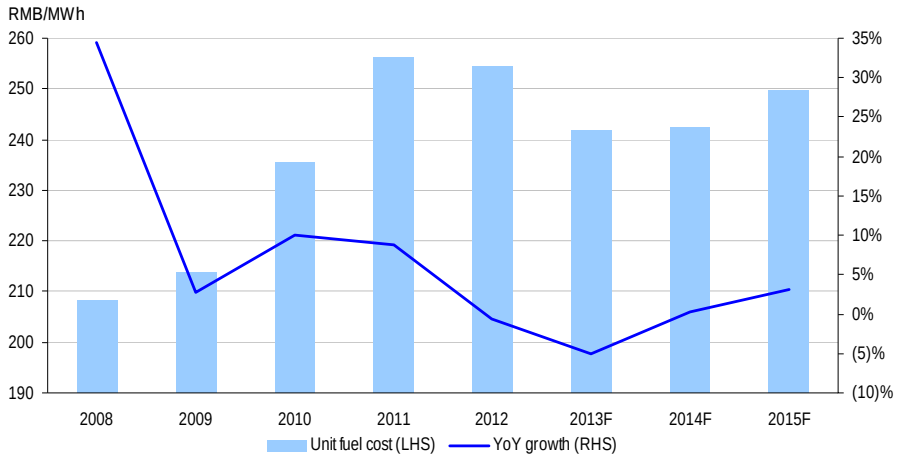
*** Expansion of Shentou Power Plant's "Replacement of small units with large units" initiative*

Source: Company data, CCBIS research

Unit fuel cost to drop 5% in 2013F

Although average spot coal price in Qinhuangdao declined 14% YoY in 2012, China Power's unit fuel cost dropped only 0.6% in the year. Management attributed this to the fact that over half of its coal procurement was based on contracts with 5% increases in price. In addition, as most of China Power's power plants are located in inland provinces, the effect of coal price declines there lags behind coal price declines in coastal provinces. For 2013F, management forecasts its unit fuel cost will drop 5-8%, which is a steeper decline than the 5% decline its peers expect. As China Power does not have a good track record of controlling its coal costs, we have conservatively assumed its unit fuel cost will drop 5% in 2013F and then remain flat in 2014F and then increase 3% in 2015F.

China Power – unit fuel cost

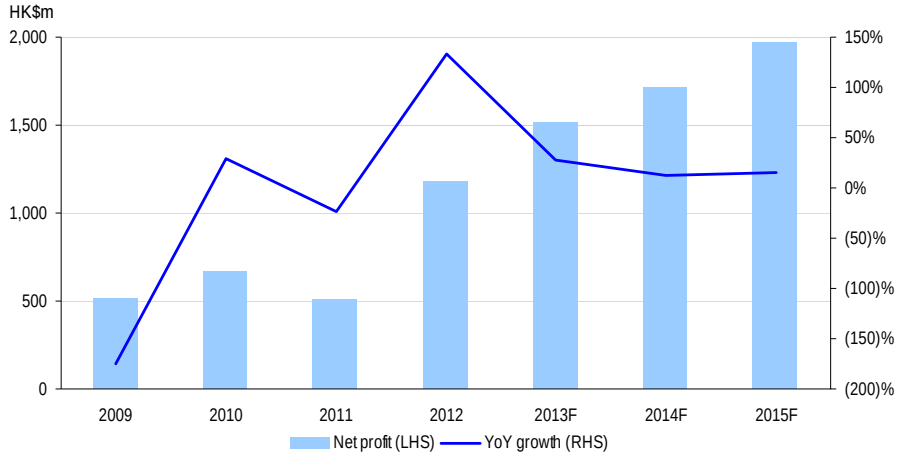


Source: Company data, CCBIS research

Net profit to grow at a 17% CAGR in 2013F-2015F

In keeping with our bearish view on coal prices, we assume no tariff hike for China Power in 2013F-2014F and an increase of only 2% in 2015F. We forecast the company's net profit to increase YoY by 28% in 2013F, 13% in 2014F and 15% in 2015F.

China Power – net profit and YoY change in 2013F-2015F



Source: Company data, CCBIS research

The table below shows our estimate of the sensitivity of China Power's earnings to key drivers. Given hydropower contributes a large portion of China Power's earnings, its earnings sensitivity to changes in unit fuel cost is lower than peers. A 1.0% difference in unit fuel costs would change its 2013F earnings by 5.1% versus 3-8% for other coal-fired IPPs.

China Power – earnings sensitivity to key drivers

Earnings drivers (%)	FY13F base case	Change	Impact on earnings
Growth in average tariff – coal-fired	0.0	+/- 1	+/- 7.9
Growth in average tariff – hydropower	(2.0)	+/- 1	+/- 2.1
Growth in unit fuel cost	(5.4)	+/- 1	-/+ 5.1
Average plant utilisation	47.0	+/- 1	+/- 5.7
Interest rate	6.1	+/- 25bp	-/+ 4.2

Source: CCBIS research

Valuation and risks

We initiate coverage on China Power with a Neutral rating and target price of HK$3.20. We use a discounted cash flow (DCF) valuation to derive our target price as we believe it captures the time value of the company's varied future cash flows, i.e., increasing contribution from its newly acquired hydropower projects and the impact of weaker coal prices. Based on a WACC of 8.0%, our DCF-based target price of HK$3.20 implies 16% potential upside.

China Power – target price calculation

Total DCF/share (2014F-2020F) (HK$)	5.11
Terminal growth rate (%)	1.0
WACC (%)	8.0
Discount factor	0.58
RMB/HK$	0.80
DCF/share (terminal value in 2020F) (HK$)	9.88
Total DCF/share (HK$)	15.00
Less: net debt (cash)/share (end-2013F)	(10.74)
	4.26
% shared by non-controlling shareholders (%)	25
Less: value shared by MI	(1.06)
DCF/share (HK$)	3.20

Source: CCBIS research

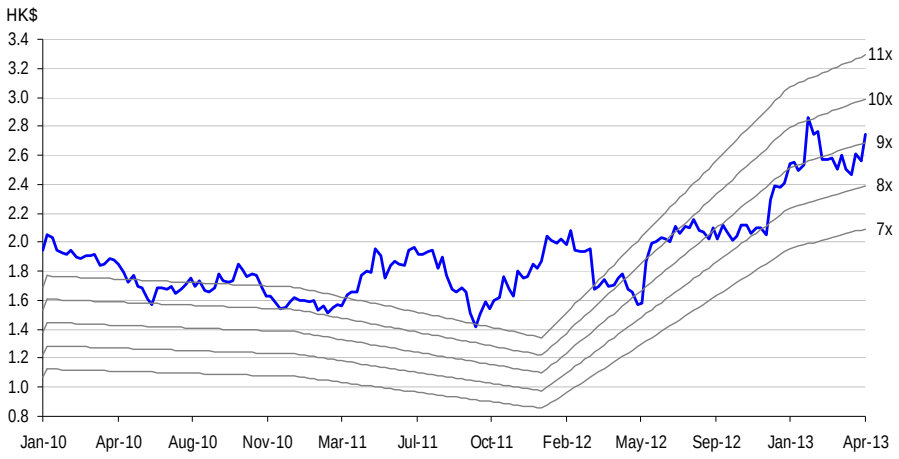
China Power – DCF sensitivity to terminal growth rate

Terminal growth rate	Equity discount rate (%)								
	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
0.0	5.87	4.74	3.78	2.94	2.21	1.56	0.99	0.48	0.02
0.5	6.81	5.52	4.42	3.48	2.67	1.96	1.33	0.78	0.28
1.0	7.94	6.43	5.17	4.11	3.20	2.41	1.72	1.11	0.57
1.5	9.32	7.53	6.06	4.84	3.81	2.92	2.16	1.49	0.89
2.0	11.04	8.87	7.13	5.71	4.52	3.52	2.66	1.91	1.26
2.5	13.25	10.54	8.43	6.74	5.36	4.21	3.24	2.40	1.67
3.0	16.20	12.69	10.06	8.01	6.37	5.03	3.91	2.96	2.15

Source: CCBIS research

In terms of P/E valuation, China Power is trading at a rolling P/E of 8x, which is lower than its three-year average of 11x. We believe that China Power's P/E does not fully reflect its high EPS CAGR of 17% for 2013F-2015F. In terms of P/B valuation, the stock is trading at a rolling P/B of 0.76x. Although this is higher than its three-year average of 0.61x, we believe that it is justified given its ROE is forecast to increase to 10% in 2013F compared with 4-8% for the past three years.

China Power – rolling P/E bands



Source: Company data, CCBIS research

China Power – rolling P/B bands

Source: Company data, CCBIS research

We believe that the key downside risks to our target price include: (1) plant utilization for coal-fired power plants to decline further in 2013F, (2) lower-than-expected declines in unit fuel costs in 2013F, and (3) the inability to maintain plant utilization for hydropower.

Catalysts for shares

We believe the key catalysts for China Power's shares are: (1) a more than 5% decline in unit fuel cost in 2013F, (2) hydropower generation maintained in 2013F, and (3) the commissioning of greenfield power projects coming back on track in 2013F-2015F.

How we differ from consensus

Our 2013F-2015F earnings forecasts are -4%, -5% and -3% different from consensus. We attribute the discrepancy mainly to the market over-estimating China Power's hydropower generation in 2013F-2015F.

China Power – CCBIS' earnings forecast vs. consensus

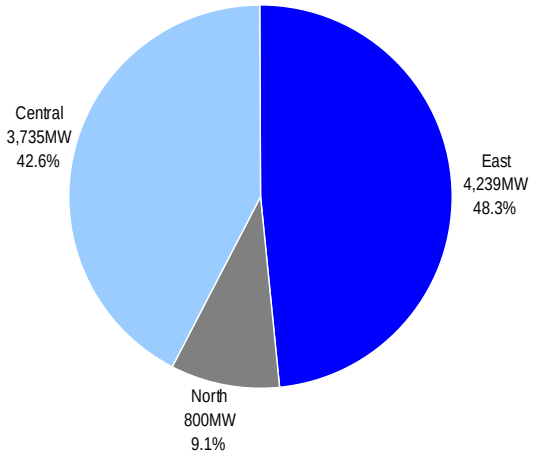
				CCBIS rating		
RMB m	2013F	2014F	2015F	Outperform	Neutral	Underperform
CCBI earnings forecast	1,516	1,713	1,967	Outperform		
YoY % change	*28*	*13*	*15*			
% difference to consensus	(4)	(5)	(3)			
Consensus earnings forecast	1,579	1,811	2,024	16	4	0
YoY % change	34	15	12			

Source: CCBIS research

Business summary

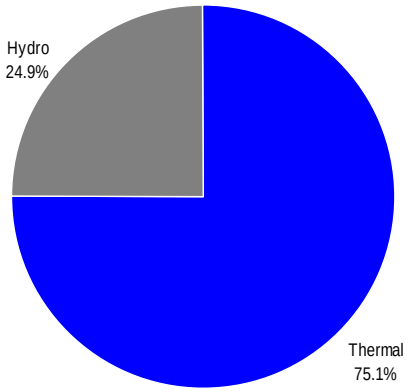
China Power is the flagship power company of China Power International Group, one of the five power generating groups in China. At the end of 2012, it had attributable capacity of 11.7GW. Compared with other coal-fired power companies, it has the largest exposure to hydropower, accounting for 25% of its total attributable capacity as at end-2012. For its thermal power capacity, over 50% is located in inland provinces.

China Power – attributable operational capacity by location (end-2012)



Source: Company data, CCBIS research

China Power – attributable operational capacity by type (end-2012)



Source: Company data, CCBIS research

China Power – key assumptions

Year to 31 December	2011	2012	2013F	2014F	2015F
Power generating capacity (MW)					
Total installed capacity	20,367	22,407	25,407	26,657	26,657
% change	*5.6*	*10.0*	*13.4*	*4.9*	*0.0*
Consolidated installed capacity	11,823	13,623	14,023	15,273	15,273
% change	*5.6*	*15.2*	*2.9*	*8.9*	*0.0*
Attributable capacity	11,510	11,731	13,581	14,329	14,329
% change	*(0.6)*	*1.9*	*15.8*	*5.5*	*0.0*
Coal-fired	8,604	8,817	10,474	10,474	10,474
Hydropower	2,906	2,914	3,107	3,855	3,855
Power generation volume (m kWh)					
Total on-grid generation	54,083	55,894	63,961	74,310	79,672
% change	*2.6*	*3.3*	*14.4*	*16.2*	*7.2*
Consolidated on-grid generation	47,392	49,203	52,807	56,699	59,880
% change	*3.0*	*3.8*	*7.3*	*7.4*	*5.6*
Coal-fired	38,800	37,196	40,801	43,463	44,548
Hydropower	8,591	12,006	12,006	13,236	15,331
Attributable on-grid generation	42,012	41,342	46,447	52,827	56,054
% change	*(6.5)*	*(1.6)*	*12.3*	*13.7*	*6.1*
Plant utilization (hours)					
Consolidated plant utilization	4,421	3,937	4,114	4,045	4,252
% change	*(1.9)*	*(10.9)*	*4.5*	*(1.7)*	*5.1*
Tariff ex-VAT (RMB/MWh)					
Average consolidated plant tariff – coal-fired	348	378	378	378	386
% change	*6.1*	*8.4*	*0.0*	*0.0*	*2.1*
Average consolidated plant tariff – hydropower	282	288	282	288	288
% change	*8.9*	*2.1*	*(2.0)*	*2.0*	*0.0*
Fuel cost per generation (RMB/MWh)					
Average consolidated unit fuel cost for coal-fired	240	239	226	226	233
% change	*40.6*	*(0.6)*	*(5.4)*	*0.0*	*3.0*

Source: Company data, CCBIS estimates

China Power – consolidated income statement

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Operating revenue	16,082	17,497	18,976	20,412	21,788
% change	*11.4*	*8.8*	*8.5*	*7.6*	*6.7*
Less: operating costs					
Fuel	(9,940)	(9,470)	(9,869)	(10,535)	(11,125)
Repair and maintenance	(490)	(549)	(578)	(649)	(661)
Depreciation	(1,810)	(2,082)	(2,338)	(2,520)	(2,662)
Staff	(825)	(984)	(1,032)	(1,155)	(1,172)
Other	(978)	(1,032)	(1,153)	(1,256)	(1,343)
	(14,043)	(14,117)	(14,970)	(16,115)	(16,963)
% change	*16.2*	*0.5*	*6.0*	*7.6*	*5.3*
Other operating income	234	179	187	194	202
Operating profit (EBIT)	2,273	3,560	4,193	4,492	5,026
% change	*(10.2)*	*56.6*	*17.8*	*7.1*	*11.9*
Operating profit margin	14.1	20.3	22.1	22.0	23.1
Net interest expenses	(1,463)	(1,571)	(1,864)	(1,957)	(2,091)
Share of associates	(28)	140	200	287	316
Profit before taxation	782	2,129	2,529	2,822	3,251
Tax	(194)	(447)	(512)	(558)	(646)
Profit after taxation	588	1,681	2,016	2,264	2,606
Non-controlling interest	(83)	(500)	(500)	(551)	(639)
Net profit	505	1,181	1,516	1,713	1,967
% change	*(24.2)*	*133.8*	*28.4*	*13.0*	*14.8*

Source: Company data, CCBIS estimates

China Power – consolidated cash flow statement

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Operating activities					
Net cash from operations	3,657	6,384	6,482	7,299	8,203
Interest paid	(2,139)	(2,562)	(2,769)	(2,931)	(2,887)
Taxes paid	(277)	(387)	(512)	(558)	(646)
	1,241	3,435	3,201	3,810	4,670
Investing activities					
(Increase)/decrease in fixed assets	(4,500)	(7,079)	(7,466)	(5,242)	(1,187)
(Increase)/decrease in associates, JCE, subsidiaries and AFS securities	(515)	0	0	180	258
Interest received	109	116	126	112	115
Other	0	0	0	0	0
	(4,907)	(6,963)	(7,340)	(4,949)	(814)
Financing activities					
Shares issues/(repurchases), net	0	930	0	0	0
Increase/(decrease) in bank loans	3,927	3,399	4,000	1,500	(3,000)
Increase/(decrease) in NCI	250	515	238	644	0
Dividends paid	(230)	(230)	(505)	(607)	(685)
Other	(78)	(250)	(125)	(138)	(160)
	3,868	4,364	3,609	1,399	(3,845)
Increase/(decrease) in cash	202	837	(530)	260	11
Cash at beginning of year	977	1,180	2,016	1,486	1,746
Cash at end of year	1,180	2,016	1,486	1,746	1,757
Add: pledged bank deposits	0	35	35	35	35
Cash balance at balance sheet	1,180	2,051	1,521	1,781	1,792

Source: Company data, CCBIS estimates

China Power – consolidated balance sheet

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Current assets					
Inventories	731	663	691	737	779
Trade and other receivables	2,703	3,285	3,278	3,526	3,764
Current portion of long-term loans to a fellow subsidiary	1,500	0	0	0	0
Bank balances and cash	1,180	2,051	1,521	1,781	1,792
Other	333	611	322	399	426
	6,447	6,610	5,811	6,444	6,761
Non-current assets					
Property, plant & equipment	49,808	56,393	62,350	65,654	64,311
Investment in associates & JCE	1,876	2,083	2,103	2,131	2,163
Goodwill	767	767	767	767	767
Other	4,494	4,056	4,056	4,056	4,056
	56,945	63,299	69,277	72,609	71,298
Total assets	63,392	69,909	75,088	79,053	78,058
Current liabilities					
Account payables and other payables	3,738	4,086	3,584	3,858	4,061
Short-term bank borrowing	4,088	4,773	4,773	4,773	4,773
Current portion of long-term loans	3,584	4,262	4,693	4,855	4,531
Other	1,936	1,125	1,180	1,208	1,250
	13,347	14,245	14,230	14,694	14,615
Non-current liabilities					
Bank loans	32,564	35,285	38,854	40,192	37,516
Other	992	1,450	1,450	1,450	1,450
	33,556	36,735	40,304	41,642	38,965
Non-controlling interest	3,365	3,987	4,600	5,658	6,137
Equity and reserves	13,125	14,942	15,954	17,060	18,341
Total equity & liabilities	63,392	69,909	75,088	79,053	78,058

Source: Company data, CCBIS estimates

China Power – key financial ratios

Year to 31 December	2011	2012	2013F	2014F	2015F
EPS (HK$)	0.12	0.28	0.34	0.39	0.44
EPS growth (%)	(20.5)	128.9	22.9	13.0	14.6
P/E (x)	22.5	9.8	8.0	7.1	6.2
DPS (HK$)	0.06	0.11	0.14	0.15	0.18
DPS growth (%)	4.9	103.7	21.5	12.7	14.8
Yield (%)	2.0	4.1	5.0	5.6	6.5
Cash earnings/share (HK$)	0.56	0.77	0.87	0.96	1.05
P/CE (x)	4.9	3.6	3.2	2.9	2.6
BV/share (HK$)	3.17	3.35	3.61	3.85	4.14
P/BV (x)	0.87	0.82	0.76	0.71	0.66
EV (HK$m)	64,309	68,656	74,888	76,478	72,695
EBITDA (HK$m)	5,004	7,192	8,456	9,170	10,058
EV/EBITDA (x)	12.9	9.5	8.9	8.3	7.2
Net debt/(cash) (RMB m)	40,736	42,923	47,454	48,694	45,682
Net debt/equity (%)	247.0	226.8	230.9	214.3	186.6
Interest cover (x)	1.6	2.3	2.2	2.3	2.4
ROE (%)	4.0	8.4	9.8	10.4	11.1

Source: Company data, CCBIS estimates

China Resources Power (836 HK)

Outlook continues to improve

- **Initiate with an Outperform rating and HK$29.00 target price.** We initiate coverage on China Resources Power (CR Power) with an Outperform rating. Our DCF-based 12-month target price of HK$29.00 suggests 19% potential upside. The company's 2013F P/E of 12x also looks attractive (versus its five-year average of 14x) given its high EPS CAGR of 15% in 2013F-2015F.

- **Capacity could expand further.** CR Power's project pipelines under construction suggest 6.4GW of capacity will come into effect in 2013F-2015F, expanding the company's attributable capacity from 25.2GW currently to 28GW by 2013F, 30.6GW by 2014F and 31.6GW by 2015F. We expect plant utilization will drop modestly by 1-2% in 2013F and the company's electricity sales YoY growth to rebound from +4% in 2012 to +10%.

- **Unit fuel cost target to decline 6% YoY**, mainly based on management's expectation that spot coal price will remain flat until year end. To achieve this target, management will: (1) cooperate more closely with coal suppliers to ensure long-term coal supply with bigger price discounts, (2) increase the use of imported coal, and (3) reduce the involvement of middlemen in coal purchases.

- **Increasing total coal production** from 16.8m tonnes in 2012 to 20m tonnes, with an increase in coal production from the Taiyuan and Lvliang coal mines. On the assumption that the average selling price of coal will rise on better coal quality, we forecast an increase in the operating profit contribution from the coal business by 107% to RMB1.6b, accounting for 11% of CR Power's total operating profit in 2013F versus 7% in 2012.

Forecasts and valuation

Year to 31 December	2011	2012	2013F	2014F	2015F
Revenue (HK$m)	60,709	62,436	70,718	80,007	88,475
Operating profit (HK$m)	9,269	11,776	15,240	16,945	18,514
Operating margin (%)	15.3	18.9	21.6	21.2	20.9
Net profit (HK$m)	4,451	7,479	9,507	10,126	11,460
EPS (HK$)	0.95	1.59	2.00	2.13	2.41
YoY change (%)	(9.9)	67.3	25.9	6.5	13.2
P/E (x)	25.8	15.4	12.2	11.5	10.2
Dividend yield (%)	1.2	2.1	2.7	2.8	3.2
Price/book value (x)	2.4	2.1	1.9	1.7	1.5
ROE (%)	9.9	14.7	16.5	15.7	15.9
Net gearing (%)	128	111	109	99	82

Source: Company data, CCBIS estimates

Company Rating: Outperform
(initiation)

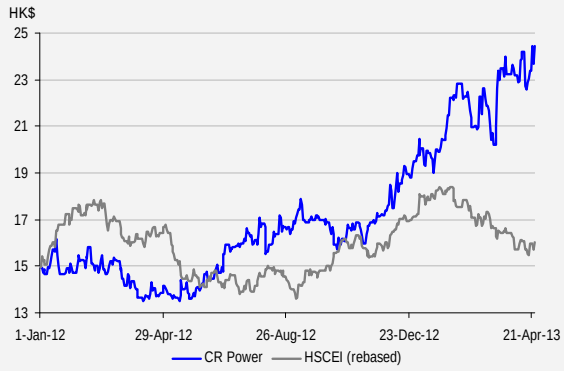
Price: HK$24.45
Target: HK$29.00
(initiation)

Trading data

52-week range	HK$13.46-25.50
Market capitalization (b)	HK$116.7/US$15.0
Shares outstanding (m)	4,763
Free float (%)	36
3M average daily T/O (m share)	7.0
3M average daily T/O (US$m)	20.1
Expected return – 1 year (%)	19

Price as at close on 24 April 2013

Stock price and HSCEI



Source: Bloomberg

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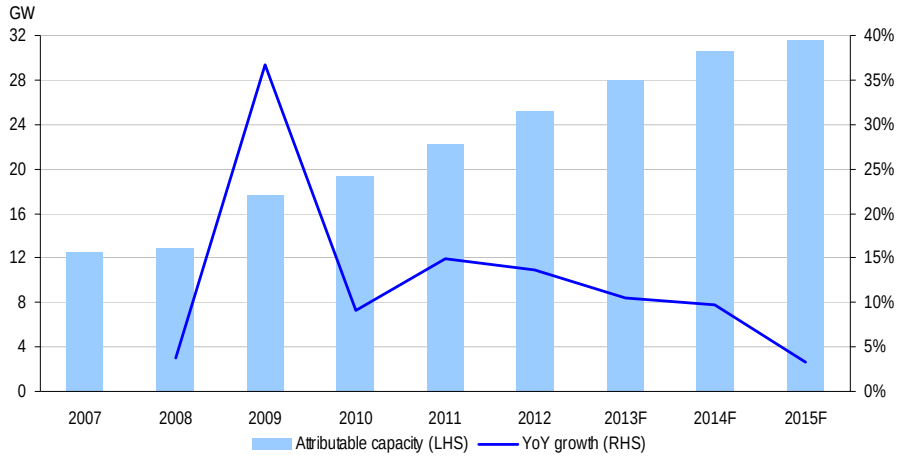
Outlook continues to improve

Capacity could expand further

Attributable capacity likely to increase from 25.3GW at end-2012 to 31.6GW by 2015F

By the end of 2012, CR Power had attributable capacity of 25.2GW. Based on the company's project pipelines under construction, around 6.5GW capacity will come into effect in 2013F-2015F. Thus, we forecast CR Power's attributable capacity will increase to 27.9GW by 2013F, to 30.6GW by 2014F and to 31.6GW by 2015F. Given the company's low net debt to equity (109% in 2013F), we see potential upside to our earnings forecast provided CR Power concludes more greenfield projects in the coming years.

CR Power – attributable capacity forecast

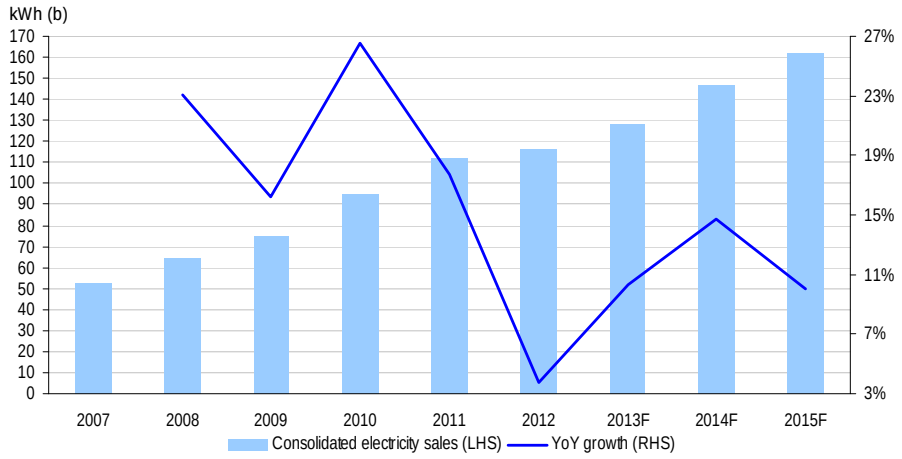


Source: Company data, CCBIS research

Electricity sales growth to rebound from +4% in 2012 to +10% in 2013F

CR Power targets average utilization for its coal-fired power plants of above 5,500 hours in 2013F. We believe this target is achievable given growth in total capacity in China will match power demand growth and result in stable average plant utilization compared with -3% YoY in 2012. In addition to our capacity expansion assumption, we forecast CR Power consolidated electricity sales growth will rebound from +4% in 2012 to 10% in 2013F.

CR Power – consolidated electricity sales forecast

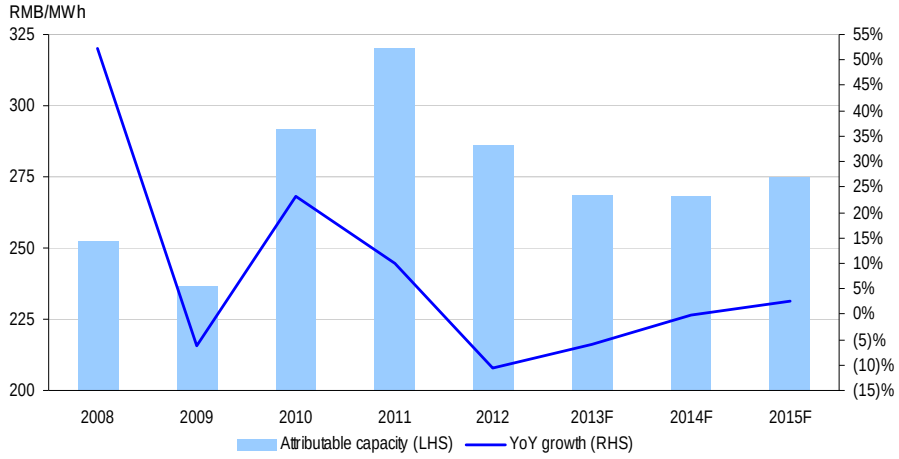


Source: Company data, CCBIS research

Unit fuel cost to drop 6% in 2013F

Since the beginning of 2013F, the spot price for Qinhuangdao 5,500kCal thermal coal remained flat at RMB610/tonne. However, on a year-on-year basis, it was down 22%. Management has guided that if the current spot coal price remains flat for the rest of the year, unit fuel cost for CR Power will drop by at least 5% YoY. To achieve this target, management will: (1) cooperate more closely with coal suppliers to ensure long-term coal supply with bigger discounts relative to the spot market, (2) increase the use of imported coal for its coastal power plants for cheaper prices, and (3) enhance the coal procurement process by reducing the involvement of middlemen and through better inventory control. As CR Power has a track record of controlling unit fuel costs vis-à-vis its peers, we factor in a 6% decline in our unit fuel cost assumptions for the company in 2013F. For 2014F and 2015F, we assume unit fuel cost to be flat and subsequently increase 3% YoY.

CR Power – unit fuel cost



Source: Company data, CCBIS research

Increasing coal production

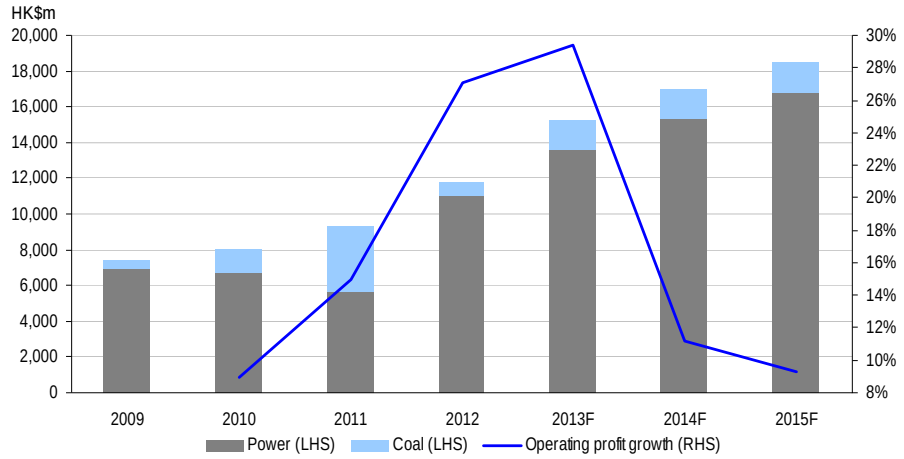
In 2012, CR Power's total coal production increased by only 1.8% YoY to 16.8m tonnes, as the increase in coal production from its Danning coal mine (from 1.5m tonnes in 2011 to 4.7m tonnes in 2012) had more-than-offset the decline in coal production from its Lvliang coal mine (which fell from 10m tonnes in 2011 to 6.8m tonnes in 2012). CR Power's equity share of coal produced was flat at 9.9m tonnes in 2012.

In 2013F, CR Power plans to increase total coal production by 20% to 20m, with most of the increments coming from the increase in production from its Taiyuan coal mine following the resumption of production and higher output from Lvliang's existing mines. Apart from higher coal production, higher production at the Taiyuan coal mine should raise CR Power's average selling price since a large portion of Lvliang's and Taiyuan's coal is coking coal that has higher heat content and, hence, garners higher prices.

Operating profit contribution from the coal business will increase 107% YoY to RMB1.6b in 2013F

On the assumption that the average coal selling price for CR Power will rise on better coal quality, we forecast an increase in the operating profit contribution from the coal business of 107% to RMB1.6b, accounting for 11% of the company's total operating profit in 2013F versus 7% in 2012.

CR Power – operating profit breakdown

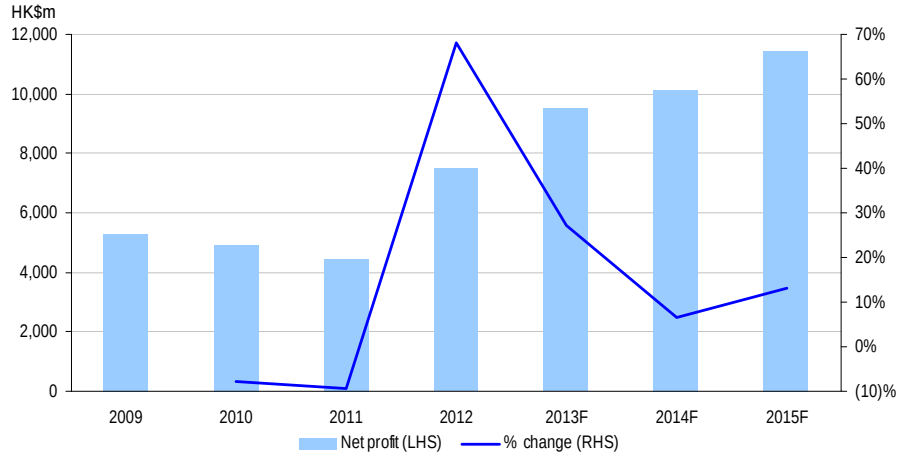


Source: Company data, CCBIS research

Net profit to increase at a CAGR of 15% in 2013F-2015F

After factoring in our assumptions of a 6% YoY decline in fuel cost per generation and a 2% YoY decline in average plant utilization, we look for 6.5GW capacity to come into effect in 2013F-2015F. As a result, we forecast CR Power's net profit will increase 27% YoY in 2013F, 7% YoY in 2014F and 13% YoY in 2015F.

CR Power – net profit and YoY change in 2013F-2015F



Source: Company data, CCBIS research

The figure below shows our estimate of the sensitivity of CR Power's earnings to key drivers. Our analysis shows that a 1.0% change in our tariff assumption would change our 2013F earnings by 5.4%, which is higher than the earnings sensitivity for a 1.0% change in unit fuel costs that would result in a 3.2% change in 2013F earnings. This is because the company's 2013F turnover is 1.6x its fuel costs. We estimate a 1.0% change in power plant utilization would change our 2013F earnings forecast by 4.1%. A 25bp change in our interest rate assumption would change our 2013F earnings forecast by 1.6%. On the whole, CR Power's earnings are the least sensitive to changes in the key earnings drivers among its peers, given CR Power's high profit margin.

CR Power – earnings sensitivity to key drivers

Earnings drivers (%)	FY13 base case	Change	Impact on earnings
Growth in average tariff	0.0	+/- 1	+/- 5.4
Growth in unit fuel cost	(6.1)	+/- 1	-/+ 3.2
Average plant utilisation	53.9	+/- 1	+/- 4.1
Interest rate	5.6	+/- 25bp	-/+ 1.6
Coal output	20m tonnes	+/- 5	-/+ 0.6
Profit per tonne of coal	RMB99/tonne	+/- 5	-/+ 2.2

Source: CCBIS research

Valuation and risks

Our target price of HK$29.00 suggests 19% potential upside

We initiate coverage on CR Power with an Outperform rating and HK$29.00 target price offering 19% potential upside. Our target price is based on DCF valuation methodology, which we believe captures the time value of the company's varied future cash flows, i.e., increasing contributions from its coal business in 2013F-2014F after expanding its coal production and after taking into account the impact of the decline in unit fuel cost. Based on a WACC of 7.9%, our DCF-based target price of HK$29.00 derives from our estimate of HK$27.60 for CR Power's power projects and HK$1.40 for the coal business.

CR Power – target price calculation

Total DCF/share (2014-2020F) (HK$)	18.0
Terminal growth rate (%)	1.0
WACC (%)	7.9
Discount factor	0.59
DCF/share (terminal value in 2020F) (HK$)	32.7
Total DCF/share (HK$)	50.6
Less: net debt (cash)/share (end-2013)	(17.7)
	32.9
% shared by minority shareholders (%)	11.8
Less: value shared by minority interest	(3.9)
DCF/share (HK$)	29.0
Composed of:	
Power business	27.6
Coal business	1.4

Source: CCBIS research

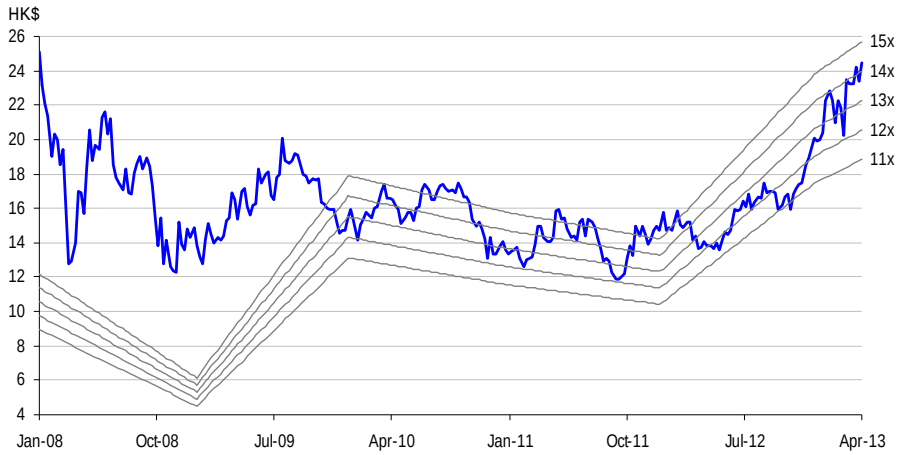
CR Power – DCF sensitivity to terminal growth rate

		WACC (%)								
		5.9	6.4	6.9	7.4	7.9	8.4	8.9	9.4	9.9
Terminal growth rate	0.0	39.5	35.1	31.3	28.0	25.1	22.6	20.3	18.3	16.5
	0.5	43.2	38.1	33.8	30.1	26.9	24.1	21.7	19.5	17.5
	1.0	47.7	41.8	36.8	32.6	29.0	25.9	23.2	20.8	18.7
	1.5	53.3	46.1	40.3	35.5	31.4	27.9	24.9	22.3	20.0
	2.0	60.2	51.5	44.6	38.9	34.2	30.3	26.9	24.0	21.4
	2.5	69.2	58.3	49.8	43.1	37.6	33.0	29.2	25.9	23.0
	3.0	81.4	67.0	56.4	48.1	41.6	36.3	31.8	28.1	24.9

Source: CCBIS research

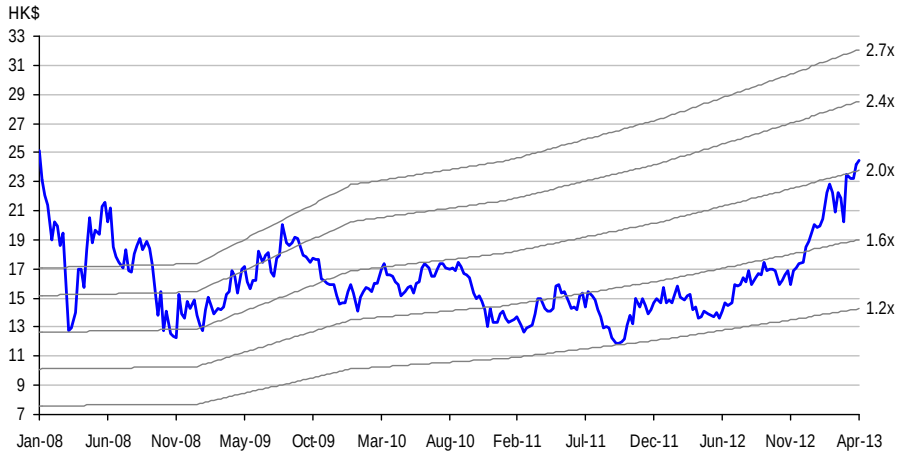
In terms of P/E valuation, CR Power is trading at a rolling P/E of 11x, which is lower than its three-year average of 14x. We believe this multiple does not fully reflect CR Power's high EPS CAGR of 15% in 2013F-2015F. Although its 2013F P/B of 1.9x is trading at a premium over its three-year average of 1.6x, it appears justified as its ROE is forecast to improve from 10-15% in 2010-2012 to 16.5% in 2013F.

CR Power – rolling P/E bands



Source: Company data, CCBIS research

CR Power – rolling P/B bands



Source: Company data, CCBIS research

In our view, key downside risks to our target price include: (1) further declines in plant utilization as the economy continues to slow, (2) lower-than-expected declines in unit fuel costs, and (3) lower-than-expected coal output from the company's coal mines.

Catalysts for the shares

We believe the key catalysts for CR Power's shares are: (1) achieving its target of a 5% decline in unit fuel cost, (2) increasing coal production from its coal mines in Shanxi, and (3) capacity expansion getting back on track.

How we differ from consensus

Our 2013F-2015F earnings forecasts are 0%, -3% and -3% different from consensus. We believe that the discrepancies are mainly due to the market having over-estimated CR Power's coal production in 2014F-2015F.

CR Power – CCBIS' earnings forecasts vs. consensus

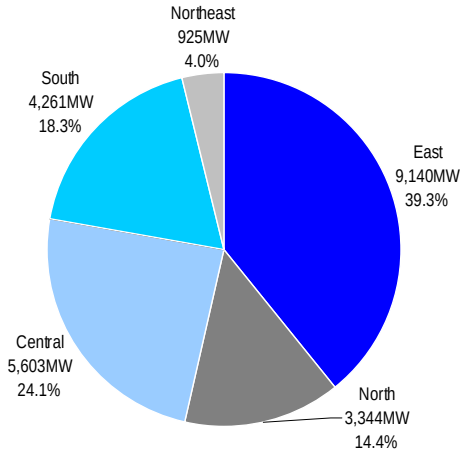
				CCBI rating		
RMB m	2013F	2014F	2015F	Outperform	Neutral	Underperform
CCBI earnings forecast	9,507	10,126	11,460	Outperform		
YoY % change	*27*	*7*	*13*			
% difference to consensus	0	(3)	(3)			
Consensus earnings forecast	9,514	10,442	11,803	26	3	0
YoY % change	*27*	*10*	*13*			

Source: CCBIS research

Business summary

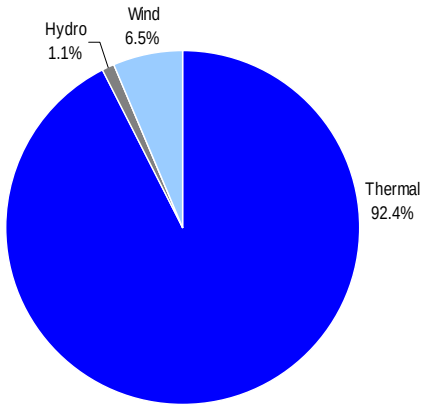
CR Power is the flagship power company of China Resource Holdings, a major PRC state-owned conglomerate based in Hong Kong. It had attributable capacity of 25GW at year-end 2012, with most of its power plants located in eastern China, central China and southern China where power demand growth is typically above the national average. CR Power was one of the first movers in investing in the coal business as a way to alleviate coal price risk.

CR Power – attributable operational capacity by location



Source: Company data, CCBIS research

CR Power – attributable operational capacity by type



Source: Company data, CCBIS research

CR Power – key assumptions

Year to 31 December	2011	2012	2013F	2014F	2015F
Power generating capacity (MW)					
Total installed capacity	32,410	36,699	39,449	42,149	43,149
% change	*10.3*	*13.2*	*7.5*	*6.8*	*2.4*
Consolidated installed capacity	22,030	26,319	29,069	31,769	32,769
% change	*17.6*	*19.5*	*10.4*	*9.3*	*3.1*
Attributable capacity – total	22,114	25,186	27,935	30,635	31,635
% change	*14.1*	*13.9*	*10.9*	*9.7*	*3.3*
Power generation volume (m kWh)					
Total on-grid generation	158,783	159,345	171,473	190,470	205,177
% change	*13.0*	*0.4*	*7.6*	*11.1*	*7.7*
Consolidated on-grid generation	112,080	116,273	128,224	147,039	161,746
% change	*17.7*	*3.7*	*10.3*	*14.7*	*10.0*
Attributable on-grid generation	119,017	120,898	131,889	150,058	165,201
% change	*15.3*	*1.6*	*9.1*	*13.8*	*10.1*
Plant utilization (hours)					
Consolidated plant utilization	5,441	4,725	4,718	4,950	5,279
% change	*0.1*	*(13.2)*	*(0.2)*	*4.9*	*6.6*
Tariff ex VAT (RMB/MWh)					
Average consolidated plant tariff	452.4	477.7	477.7	477.7	484.9
% change	*3.2*	*5.6*	*0.0*	*0.0*	*1.5*
Fuel cost per generation (RMB/MWh)					
Average consolidated unit fuel cost	320.2	286.2	268.8	268.2	275.2
% change	*9.9*	*(10.6)*	*(6.1)*	*(0.2)*	*2.6*

Source: Company data, CCBIS estimates

CR Power – consolidated income statement

Year to 31 December (HK$m)	2011	2012	2013F	2014F	2015F
Operating revenue	60,709	62,436	70,718	80,007	88,475
% change	*25.0*	*2.8*	*13.3*	*13.1*	*10.6*
Less: operating costs					
Fuel	(38,383)	(35,589)	(37,234)	(42,592)	(48,087)
Repair and maintenance	(1,015)	(1,145)	(1,316)	(1,481)	(1,574)
Depreciation	(5,502)	(6,183)	(6,963)	(8,034)	(8,653)
Staff	(3,247)	(3,762)	(4,302)	(4,819)	(5,095)
Other	(5,500)	(5,457)	(6,785)	(7,281)	(7,720)
	(53,647)	(52,137)	(56,600)	(64,207)	(71,128)
% change	*29.4*	*(2.8)*	*8.6*	*13.4*	*10.8*
Other operating income	2,207	1,477	1,122	1,144	1,167
Operating profit (EBIT)	9,269	11,776	15,240	16,945	18,514
% change	*14.9*	*27.0*	*29.4*	*11.2*	*9.3*
Operating profit margin	15.3	18.9	21.6	21.2	20.9
Finance costs	(3,516)	(3,836)	(4,159)	(4,637)	(4,529)
Interest income	271	230	229	234	236
Share of associates	740	1,643	1,604	1,674	1,726
Share of JCE	97	90	91	91	91
Profit before taxation	6,862	9,904	13,005	14,307	16,038
Taxes	(1,243)	(1,179)	(1,975)	(2,567)	(2,911)
Profit after taxation	5,619	8,725	11,030	11,740	13,128
Minority interest	(1,169)	(1,246)	(1,523)	(1,614)	(1,668)
Net profit	4,451	7,479	9,507	10,126	11,460
% change	*(9.2)*	*68.0*	*27.1*	*6.5*	*13.2*

Source: Company data, CCBIS estimates

CR Power – consolidated cash flow statement

Year to 31 December (HK$m)	2011	2012	2013F	2014F	2015F
Operating activities					
Net cash from operations	13,551	20,168	19,585	23,532	26,541
Taxes paid	(976)	(1,203)	(1,975)	(2,823)	(3,493)
	12,575	18,965	17,610	20,709	23,049
Investing activities					
(Increase)/decrease in fixed assets	(14,789)	(9,087)	(19,963)	(16,367)	(7,905)
Acquisition of subsidiaries	0	(425)	0	0	0
(Increase)/decrease in associates and JCE	(4,508)	(675)	1,140	1,144	1,144
Interest received	389	232	229	234	236
Other	4	(29)	0	0	0
	(18,904)	(9,983)	(18,594)	(14,989)	(6,525)
Financing activities					
Shares issues/(repurchases), net	117	108	0	0	0
Increase/(decrease) in minority interest	(1,028)	(639)	778	654	(379)
Increase/(decrease) in loans	3,475	(3,572)	7,474	2,020	(8,080)
Increase/(decrease) in associates and group cost	1,149	1,180	0	0	0
Increase/(decrease) in perceptual capital securities	5,585	(422)	0	0	0
Dividend paid	(1,549)	(1,414)	(2,486)	(3,086)	(3,312)
Interest paid	(3,951)	(4,346)	(4,800)	(5,095)	(4,906)
Other	(78)	(13)	0	0	0
	3,720	(9,119)	966	(5,507)	(16,678)
Increase/(decrease) in cash	(2,609)	(137)	(18)	214	(154)
Cash at beginning of year	6,802	4,497	4,397	4,380	4,593
Effect on FX change	304	37	0	0	0
Cash at end of year	4,497	4,397	4,380	4,593	4,440
Add: pledged bank deposits	307	254	254	254	254
Cash balance at bal sheet	4,804	4,651	4,633	4,847	4,693

Source: Company data, CCBIS estimates

CR Power – consolidated balance sheet

Year to 31 December (HK$m)	2011	2012	2013F	2014F	2015F
Current assets					
Inventories	3,593	3,259	3,409	3,900	4,403
Trade and other receivables	16,123	14,759	14,595	16,512	18,260
Bank balances and cash	4,804	4,651	4,633	4,847	4,693
Other	1,287	4,125	4,166	4,201	4,236
	25,806	26,793	26,804	29,460	31,592
Non-current assets					
Property, plant and equipment	109,424	120,085	134,192	142,439	141,612
Investment in associates and JCE	19,989	20,789	21,722	22,449	23,176
Goodwill	4,033	3,914	3,953	3,953	3,953
Other	9,114	6,208	6,092	6,137	6,182
	142,560	150,996	165,958	174,978	174,923
Total assets	168,366	177,790	192,762	204,438	206,516
Current liabilities					
Trade and other payables	19,306	23,022	22,385	24,096	25,257
Bank loans	26,418	20,391	22,493	23,006	20,954
Other	3,252	4,086	2,693	1,941	1,941
	48,976	47,499	47,571	49,043	48,152
Non-current liabilities					
Bank loans	56,569	59,876	66,050	67,557	61,530
Other	1,248	1,519	1,370	1,207	1,209
	57,817	61,395	67,420	68,765	62,739
Non-controlling interests	14,099	14,853	16,727	18,571	19,446
Equity and reserves	47,473	54,043	61,044	68,059	76,179
Total equity and liabilities	168,366	177,790	192,762	204,438	206,516

Source: Company data, CCBIS estimates

CR Power – key financial ratios

Year to 31 December (HK$m)	2011	2012	2013F	2014F	2015F
EPS (HK$)	0.95	1.59	2.00	2.13	2.41
EPS growth (%)	(9.9)	67.3	25.9	6.5	13.2
P/E (x)	25.8	15.4	12.4	11.5	10.2
DPS (HK$)	0.30	0.51	0.65	0.69	0.78
DPS growth (%)	(9.2)	69.8	27.1	6.5	13.2
Yield (%)	1.2	2.1	2.7	2.8	3.2
Cash earnings/share (HK$)	2.12	2.90	3.46	3.81	4.22
P/CE (x)	10.1	8.4	7.1	6.4	5.8
BV/share (HK$)	10.11	11.46	12.82	14.29	15.99
P/BV (x)	2.42	2.13	1.91	1.71	1.53
EV (HK$m)	194,717	192,584	200,838	202,642	194,717
EBITDA (HK$m)	15,608	19,693	23,899	26,744	28,984
EV/EBITDA (x)	12.0	9.8	8.4	7.6	6.7
Net debt (HK$m)	78,700	76,132	84,386	86,190	78,265
Net debt/equity (%)	127.8	110.5	108.5	99.5	81.8
Interest cover (x)	2.9	3.3	3.9	3.8	4.3
ROE (%)	9.9	14.7	16.5	15.7	15.9
ROA (%)	6.7	7.9	9.3	9.5	10.0

Source: Company data, CCBIS estimates

Datang Power (991 HK)

Non-power projects still an overhang

- **Initiate with a Neutral rating and HK$3.50 target price** as our DCF-based target price for Datang suggests only 2% potential upside. The company's 2013F P/E of 8x appears undemanding compared with its three-year average of 12x. However, given its high operating leverage, any delays in the commissioning of its non-power projects or any failures by its projects to deliver reasonable returns could have a substantial impact on earnings.

- **Benefits from weak coal price.** We factor in -5%, 0% and +4% for Datang's 2013F-2015F unit fuel costs. Although we assume no tariff hike in 2013F-2014F, we look for improvement in its operating margin, from 17.4% in 2012 to 20.6% in 2015F. Better operating margins should drive the company's recurrent earnings growth to 60%, 13% and 15% in 2013F-2015F.

- **Renewed uncertainty on non-power projects.** Datang's coal-to-chemical project has been delayed for three years due to capex overruns. Given mounting technical difficulties, Datang will have a tough time achieving its target for the project of achieving its hurdle utilization rate in 2013F. To be on the safe side, we conservatively forecast the project to generate a net profit of RMB58m for 2013F.

- **Net gearing to remain above 310% in 2013F-2015F** as free cash flows should remain negative given the huge capex earmarked for the development of coal-to-gas projects over the next three years. Given its low interest coverage ratio of 1.6x after the full commercialization of its coal-to-chemical project (the project is currently operational but with low utilization), any deterioration in outlook could impact its earnings significantly.

Forecasts and valuation

Year to 31 December	2011	2012	2013F	2014F	2015F
Revenue (RMB m)	72,382	77,598	82,323	86,061	91,798
Operating profit (RMB m)	9,553	13,510	16,065	17,642	18,952
Operating margin (%)	13.2	17.4	19.5	20.5	20.6
Net profit (RMB m)	1,971	4,062	4,421	5,010	5,748
EPS (HK$)	0.19	0.38	0.42	0.47	0.54
YoY change (%)	-23.9	101.3	9.9	13.3	14.7
P/E (x)	18.2	9.1	8.2	7.3	6.3
Dividend yield (%)	3.9	3.6	4.0	4.5	5.2
Price/book value (x)	0.9	0.9	0.8	0.8	0.7
ROE (%)	5.6	10.1	10.2	10.8	11.4
Net gearing (%)	315.9	315.3	329.4	321.8	310.9

Source: Company data, CCBIS estimates

Company Rating: Neutral
(initiation)

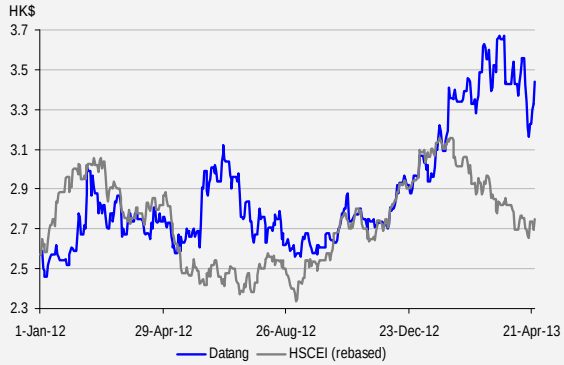
Price: HK$3.44
Target: HK$3.50
(initiation)

Trading data

52-week range	HK$2.51-3.72
Market capitalization (b)	HK$65.9/US$8.5
Shares outstanding (m)	13,310
Free float (%)	36
3M average daily T/O (m share)	17.3
3M average daily T/O (US$m)	7.6
Expected return – 1 year (%)	2

Price as at close on 24 April 2013

Stock price and HSCEI



Source: Bloomberg

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Non-power projects still an overhang

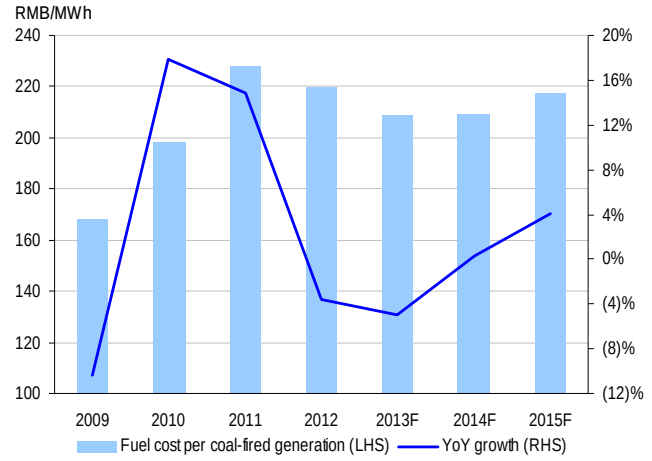
Benefiting from weak coal prices

We forecast a 5% decline in unit fuel cost in 2013F, flat fuel cost in 2014F and +4% in 2015F

We believe softer coal prices will continue to benefit Datang. According to management, the company's unit fuel cost is targeted to fall 3-5% in 2013F, lower than the 5-7% decline targeted by other coal-fired IPPs due to the difference in geographical locations and the mix of suppliers. For 2013F, Datang targets consumption of 95-100m tonnes of coal, with 60% of the total based on long-term contracts with a large portion linked with the Bohai Bay Thermal Coal Price Index.

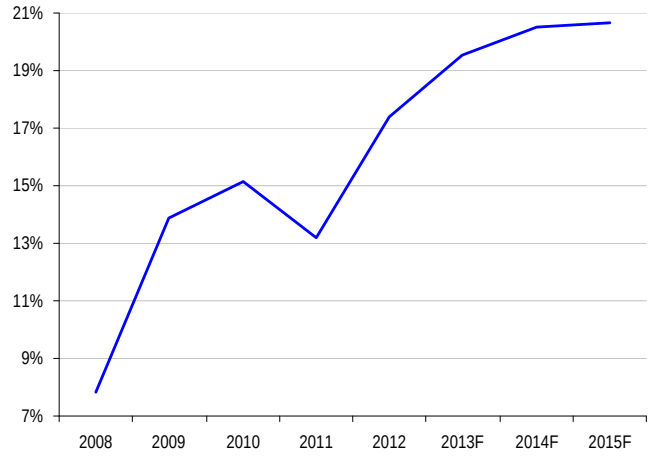
Since the beginning of 2013, the spot price for Qinhuangdao 5,500kCal thermal coal dropped marginally from RMB620/tonne to RMB610/tonne. On a year-on-year basis, it declined 22%. If the spot coal price remains flat for the rest of the year, we believe that is should be easy for the company to achieve the high-end of its target. In all, we factor in -5%, 0% and +4% for Datang's unit fuel cost in 2013F-2015F. Although, we assume no tariff hike for Datang in 2013F-2014F, we still forecast that its operating margin will improve from 17.4% in 2012 to 19.5% in 2013F and 20.5% in 2014F.

Datang – fuel cost per coal-fired power generation



Source: Company data, CCBIS research

Datang – operating margin forecast



Source: Company data, CCBIS research

Uncertainty on non-power project returns

Insignificant earnings contribution from the coal-to-chemical project in 2013F

Datang's coal-to-chemical project in Duolun has been delayed for three years due to a capex overrun of over 50% to RMB26b. Since the project achieved a usable condition (i.e. the project reached the stage where operations can begin) in December 2012, 70% of the project, formally classified as "under construction" was reclassified as fixed assets. For 2013F, Datang looks to produce 330k tonnes of polypropylene (versus its designed annual capacity of 460k tonnes), sufficient we believe for the firm to reach a 70% utilization rate, the breakeven point for the project.

Management believes the outlook for 2013F is still challenging given the difficulties encountered managing the gasification process with the use of poor quality coal. To be on the safe side, we forecast the project will generate a conservative RMB58m in net profit in 2013F after accounting for higher depreciation expenses.

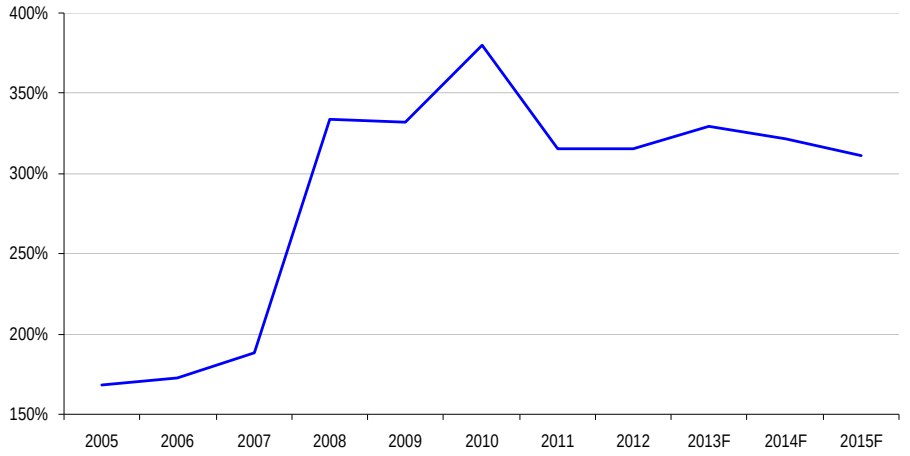
Apart from the coal-to-chemical project, we also see risks for Datang's coal-to-gas projects, again due to delays arising from the time consuming job of constructing the gas pipelines necessary to transport natural gas from Datang's coal-to-gas projects as well as the lengthy negotiations over gas offtake volume and price. Should any of the aforementioned delays occur, they could increase financing costs and lower project returns. To be conservative, we have not factored in contributions from Datang's coal-to-gas projects.

Net gearing to remain high

Net gearing will stay above 300% in 2013F-2015F

Hurt by higher coal costs that tariff hikes did little to mitigate, Datang saw profit margin squeezed significantly in 2003-2011. Lower profits and greater amounts of capex required for expansion have resulted in negative free cash flow. Net gearing increased from 52% in 2003 to 316% in 2011. In 2012, a decline in coal price helped Datang return to high earnings growth (+44% YoY growth for recurrent earnings) and we believe this trend will continue in 2013F (+60% YoY). However, as the company's capex will also be high due to the development of coal-to-gas projects in 2013F-2015F (RMB18b-22b p.a.), negative free cashflows will persist, with net gearing sticking stubbornly above 310% in the coming years.

Datang – net gearing (1999-2015F)



Source: Company data, CCBIS research

Low interest coverage of 1.6x could deeply impact Datang's earnings should the outlook for the company deteriorate unexpectedly

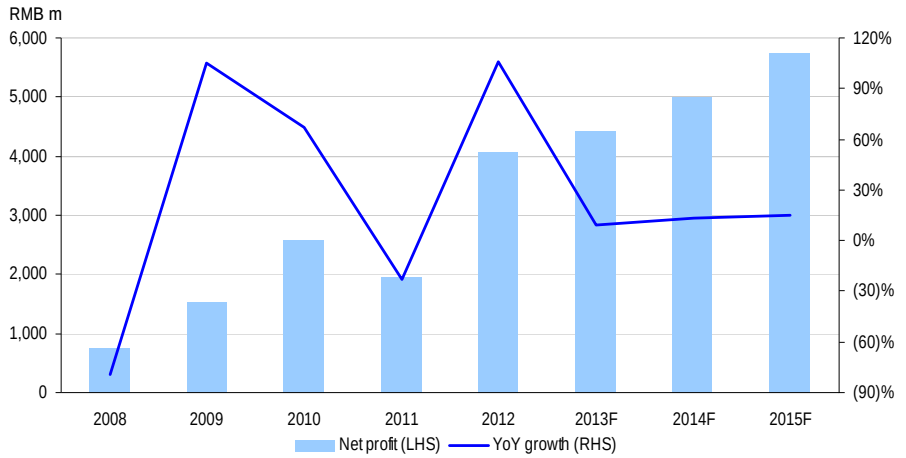
Once Datang's coal-to-chemical projects become fully operational, the company's depreciation and financing costs will increase from RMB17b in 2012 to RMB19b in 2015F, according to our forecasts. As Datang has a low interest coverage ratio of only 1.6x versus the sector average of 2.7x, any deterioration in the company's outlook could impact its earnings significantly (e.g. further delays in non-power projects, a pickup in coal prices, or higher-than-expected interest rate hikes).

Recurrent earnings growth to persist in 2013F-2015F

We forecast Datang's recurrent earnings will increase 60% in 2013F, 13% in 2014F and 15% in 2015F

Our unit fuel cost assumptions for Datang in 2013F-2015F are -5.0%, 0.0% and +3.5%. These figures reflect our outlook for weak coal prices. We assume no tariff hike for the company in 2013F-2014F and a tariff increase of only 2% in 2015F. As we expect power demand for the country to remain weak in the near term, we assume the company's average plant utilization will decline 2% in 2013F. Turning to Datang's coal-to-chemical project, we conservatively assume it will achieve a 70% utilization rate, the project's breakeven point. Finally, we forecast the company's recurrent earnings will increase 60% in 2013F, 13% in 2014F and 15% in 2015F.

Datang – net profit and YoY change in 2013F-2015F



Source: Company data, CCBIS research

The table below shows our sensitivity estimates for Datang's earnings to key drivers. As Datang's profit margin is on par with the sector average, its earnings sensitivity to tariffs, unit fuel cost and utilization is comparable to most of its peers, like China power and Huaneng. Our analysis shows that a 1% change in our assumptions on average tariff, unit fuel cost and average plant utilization would change our 2013F earnings by 8%, 5% and 6%, respectively. However, given Datang's high net gearing and low interest coverage within the sector, it has a high earnings sensitivity to interest rates vis-à-vis its peers. A 25bp difference in our interest rate assumption would change our 2013F earnings forecast by 4%.

Datang – earnings sensitivity to key drivers

Earnings drivers (%)	FY13 base case	Change	Impact on earnings
Growth in average tariff	0.0	+/- 1	+/- 8.4
Growth in unit fuel cost	(5.0)	+/- 1	-/+ 4.6
Average plant utilization	57.2	+/- 1	+/- 6.1
Interest rate	6.7	+/- 25bps	-/+ 4.4

Source: CCBIS research

Valuation and risks

Our DCF-based target price of HK$3.50 suggests 2% potential upside

We initiate coverage on Datang with a Neutral rating as our HK$3.50 target price suggests only 2% potential upside. We employ DCF valuation with a WACC of 8.5% to derive our target price as this valuation method captures the time value of Datang's varied future cash flows, i.e. a pickup in operating cash inflows in the near term due to a decline in coal price and taking into account the commencement of operations of its coal-to-chemical and coal-to-gas projects in 2013F-2015F.

Datang – target price calculation

Total DCF/share (2014F-2020F) (HK$)	6.99
Terminal growth rate (%)	1.0
WACC (%)	8.5
Discount factor	0.56
RMB/HK$	0.80
DCF/share (terminal value in 2020F) (HK$)	16.94
Total DCF/share (HK$)	23.93
Less: net debt/share (end-2013F)	(19.09)
	4.84
% shared by minority shareholders (%)	27.7
Less: value shared by minority interest	(1.34)
DCF/share (existing power plants) (HK$)	3.50

Source: CCBIS research

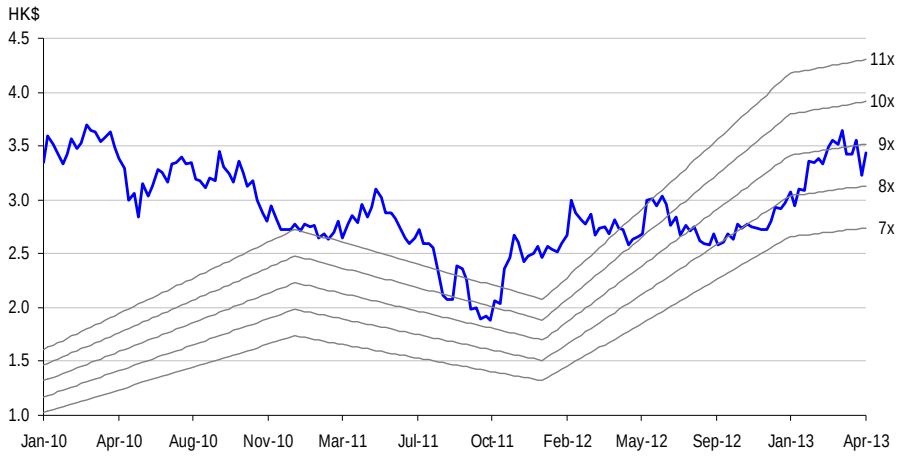
Datang – DCF sensitivity to terminal growth rate

Terminal growth rate	WACC (%) 6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5
0.0	7.66	5.92	4.42	3.11	1.95	0.93	0.02	(0.80)	(1.54)
0.5	9.07	7.10	5.41	3.95	2.68	1.56	0.56	(0.32)	(1.12)
1.0	10.74	8.47	6.56	4.92	3.50	2.26	1.17	0.21	(0.66)
1.5	12.75	10.10	7.89	6.03	4.44	3.06	1.86	0.80	(0.14)
2.0	15.20	12.05	9.47	7.33	5.52	3.98	2.64	1.47	0.44
2.5	18.26	14.43	11.37	8.87	6.79	5.03	3.53	2.23	1.09
3.0	22.20	17.41	13.69	10.71	8.28	6.26	4.55	3.09	1.83

Source: CCBIS research

Datang is currently trading at a P/E of 8x, which looks undemanding compared with its three-year average of 12x. However, given its high operating leverage, delays in the commissioning of its non-power projects and the possibility its projects do not deliver expected returns, earnings could be substantially lower than we currently project. In terms of P/B, Datang is trading on par with its three-year average of 0.8x.

Datang – rolling P/E bands



Source: Company data, CCBIS research

Datang – rolling P/B bands

Source: Company data, CCBIS research

We believe that the key downside risks to our target price include: (1) further declines in plant utilization due to a slowdown in the economy, (2) a lower-than-expected decline in unit fuel costs, (3) cost overruns at the company's coal-to-chemical and coal-to-gas projects, (4) further delays in the commissioning of the coal-to-chemical and coal-to-gas projects, and (5) higher-than-expected interest rate hikes given Datang's high net gearing.

How we differ from consensus

Our earnings estimates for Datang are largely in line with consensus for 2013F but below consensus for 2014F-2015F. We believe the discrepancy is mainly due to our conservative assumptions on the commercial production schedule of its coal-to-chemical and coal-to-gas businesses in the coming years.

Datang – CCBIS's earnings forecast vs. consensus

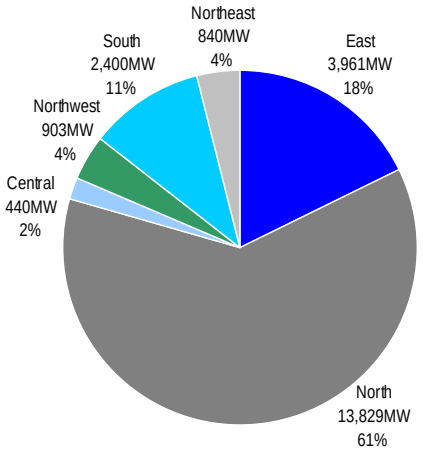
				CCBI rating		
RMB m	2013F	2014F	2015F	Outperform	Neutral	Underperform
CCBI earnings forecast	4,421	5,010	5,748		Neutral	
YoY % change	*9*	*13*	*15*			
% difference to consensus	1	(4)	(10)			
Consensus earnings forecast	4,386	5,195	6,416	9	16	2
YoY % change	*8*	*18*	*24*			

Source: CCBIS research

Business summary

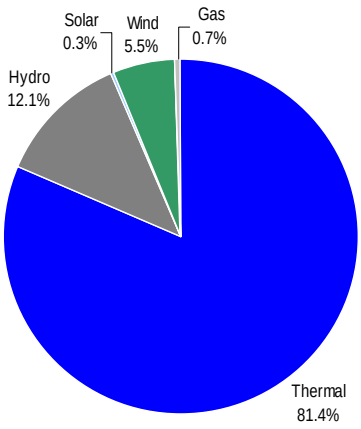
Datang is the flagship power company of China Datang Corporation, one of the Big Five power generating groups in China. At the end of 2012, it had attributable capacity of 27GW (81% for coal-fired power, 12% for hydropower and 6% for wind power). For its coal-fired power portfolio, Datang is highly focused in northern China, which accounted for 61% of the company's total coal-fired power capacity in 2012. Datang has diversified into the coal-to-chemical business in Inner Mongolia and two coal-to-gas projects in Inner Mongolia and Liaoning.

Datang – attributable operational coal-fired capacity by location (end-2012)



Source: Company data, CCBIS research

Datang – attributable operational capacity by type (end-2012)



Source: Company data, CCBIS research

Datang – key assumptions

Year to 31 December	2011	2012	2013F	2014F	2015F
Power generating capacity (MW)					
Total installed capacity	40,283	40,946	44,635	46,722	49,127
% change	*9.5*	*1.6*	*9.0*	*4.7*	*5.1*
Consolidated installed capacity	38,483	39,146	40,835	41,922	43,327
% change	*10.0*	*1.7*	*4.3*	*2.7*	*3.4*
Attributable capacity – total	26,794	27,430	30,241	31,768	33,614
% change	*7.8*	*2.4*	*10.3*	*5.0*	*5.8*
Power generation volume (m kWh)					
Total on-grid generation	201,214	199,727	208,680	229,391	245,418
% change	*13.5*	*(0.7)*	*4.5*	*9.9*	*7.0*
Consolidated on-grid generation	192,009	190,522	192,965	200,656	210,173
% change	*14.1*	*(0.8)*	*1.3*	*4.0*	*4.7*
Attributable on-grid generation	133,948	133,733	141,538	153,896	165,470
% change	*11.7*	*(0.2)*	*5.8*	*8.7*	*7.5*
Plant utilization (hours)					
Consolidated plant utilization	5,294	5,164	5,012	5,073	5,140
% change	*3.7*	*(2.5)*	*(2.9)*	*1.2*	*1.3*
Tariff ex-VAT (RMB/MWh)					
Average consolidated plant tariff	335	354	354	354	360
% change	*5.2*	*5.5*	*0.0*	*0.0*	*1.8*
Fuel cost per coal-fired generation (RMB/MWh)					
Average consolidated unit fuel cost	228	220	209	209	218
% change	*14.9*	*(3.6)*	*(5.0)*	*0.3*	*4.0*

Source: Company data, CCBIS estimates

Datang – consolidated income statement

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Operating revenue	72,382	77,598	82,323	86,061	91,798
% change	*19.3*	*7.2*	*6.1*	*4.5*	*6.7*
Less: operating costs					
Fuel	(44,484)	(44,469)	(42,828)	(44,498)	(48,455)
Depreciation	(8,605)	(8,820)	(8,956)	(8,688)	(8,349)
Wages and staff welfare	(2,367)	(2,748)	(2,910)	(3,032)	(3,181)
Repair and maintenance	(1,899)	(2,362)	(2,360)	(2,467)	(2,595)
Local government surcharges	(569)	(670)	(689)	(727)	(773)
Other	(4,905)	(5,019)	(8,516)	(9,007)	(9,493)
	(62,829)	(64,088)	(66,258)	(68,419)	(72,846)
% change	*22.1*	*2.0*	*3.4*	*3.3*	*6.5*
Operating profit (EBIT)	9,553	13,510	16,065	17,642	18,952
% change	*3.8*	*41.4*	*18.9*	*9.8*	*7.4*
Operating profit margin	13.2	17.4	19.5	20.5	20.6
Share of associates	1,040	792	1,157	1,286	1,526
Interest income	110	72	74	76	75
Investment income	50	474	498	523	549
Finance costs	(7,102)	(8,568)	(9,826)	(10,495)	(10,953)
Exceptional item	59	1,306	0	0	0
Profit before taxation	3,710	7,586	7,967	9,032	10,150
Tax	(668)	(1,361)	(1,467)	(1,668)	(1,857)
Profit after taxation	3,042	6,225	6,501	7,364	8,293
Non-controlling interest	(1,071)	(2,163)	(2,080)	(2,354)	(2,544)
Net profit	1,971	4,062	4,421	5,010	5,748
% change	*(23.3)*	*106.1*	*8.8*	*13.3*	*14.7*

Source: Company data, CCBIS estimates

Datang – consolidated cash flow statement

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Operating activities					
Net cash from operations	14,104	23,271	21,194	26,367	27,269
Interest received	110	72	74	76	75
Taxes paid	(1,279)	(1,655)	(1,467)	(1,668)	(1,857)
	12,935	21,688	19,802	24,775	25,487
Investing activities					
(Increase)/decrease in fixed assets	(26,002)	(25,375)	(22,818)	(18,970)	(17,960)
Other	(2,752)	(5,178)	464	635	863
	(28,754)	(30,553)	(22,354)	(18,335)	(17,097)
Financing activities					
Shares issues/(repurchases)	6,671	0	0	0	0
Increase/(decrease) in NCI	2,406	1,339	826	0	0
Increase/(decrease) in loans	17,486	21,934	17,000	10,000	8,500
Dividend paid to owner of the company	(932)	(1,464)	(1,331)	(1,448)	(1,641)
Non-controlling interests	(1,067)	(1,298)	(1,248)	(1,413)	(1,527)
Interest paid	(9,001)	(11,433)	(12,576)	(13,423)	(14,009)
Other	1,256	(68)	0	0	0
	16,818	9,010	2,672	(6,284)	(8,677)
Increase/(decrease) in cash	998	145	119	156	(288)
Cash at beginning of year	3,443	4,467	4,613	4,732	4,888
Exchange losses	26	0	0	0	0
Cash at end of year	4,467	4,613	4,732	4,888	4,601

Source: Company data, CCBIS estimates

Datang – consolidated balance sheet

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Current assets					
Inventories	6,094	5,215	4,998	5,185	5,677
Trade and other receivables	19,451	20,000	19,784	20,682	22,061
Cash & cash equivalents	4,467	4,613	4,732	4,888	4,601
Other	62	99	0	0	0
	30,074	29,927	29,514	30,755	32,339
Non-current assets					
Property, plant and equipment	200,923	221,477	246,016	259,632	272,725
Investment in associates	8,875	11,313	12,006	12,657	13,320
Other	7,826	12,560	12,246	12,186	12,142
	217,624	245,351	270,268	284,474	298,186
Total assets	247,697	275,278	299,782	315,229	330,525
Current liabilities					
Trade and other payables	23,940	23,877	21,373	22,070	23,498
Short-term loans	21,524	22,240	22,324	21,324	20,324
Current portion of long-term loans	15,625	13,609	15,068	16,012	16,827
Short-term bonds	1,400	4,400	4,400	4,400	4,400
Other	926	1,312	1,196	1,345	1,484
	63,415	65,438	64,360	65,150	66,532
Non-current liabilities					
Long-term loans	117,654	129,446	151,627	161,683	170,368
Long-term bonds	8,937	14,405	14,405	14,405	14,405
Other	6,959	9,329	7,982	8,080	8,184
	133,550	153,180	174,014	184,169	192,957
Non-controlling interest	11,791	15,001	16,660	17,601	18,619
Equity and reserves	38,941	41,658	44,748	48,309	52,416
Total equity and liabilities	247,697	275,278	299,782	315,229	330,525

Source: Company data, CCBIS estimates

Datang – key financial ratios

Year to 31 December	2011	2012	2013F	2014F	2015F
EPS (HK$)	0.19	0.38	0.42	0.47	0.54
EPS growth (%)	(23.9)	101.3	9.9	13.3	14.7
P/E (x)	18.2	9.1	8.2	7.3	6.3
DPS (HK$)	0.14	0.12	0.14	0.15	0.18
DPS growth (%)	64.8	(8.4)	9.9	13.3	14.7
Yield (%)	3.9	3.6	4.0	4.5	5.2
Cash earnings/share (HK$)	1.01	1.20	1.26	1.29	1.33
P/CE (x)	3.4	2.9	2.7	2.7	2.6
BV/share (HK$)	3.73	3.89	4.22	4.56	4.95
P/BV (x)	0.92	0.88	0.81	0.75	0.70
EV (HK$m)	243,519	268,009	299,913	312,281	323,322
EBITDA (HK$m)	23,823	30,977	33,517	35,357	36,911
EV/EBITDA (x)	10.2	8.7	8.9	8.8	8.8
Net debt/(cash) (HK$m)	160,250	178,649	202,253	212,097	220,885
Net debt/equity (%)	315.9	315.3	329.4	321.8	310.9
Interest cover (x)	1.4	1.6	1.6	1.7	1.7
ROE (%)	5.6	10.1	10.2	10.8	11.4

Source: Company data, CCBIS estimates

Datang Renewable (1798 HK)

High leverage on utilization recovery

- **Initiate with an Outperform rating and H$2.00 target price**, implying 18% potential upside. 2013F P/E also looks attractive at 16x with high EPS CAGR of 118% for 2013-2015F.

- **Relief of grid bottleneck provides potential upside to utilization.** Datang Renewable (DTR) has the largest exposure to Inner Mongolia and northeastern China, two of the areas most affected by the power grid curtailment imposed last year. Management expects the restriction will gradually lift in 2013F, especially in the aforementioned areas. We forecast DTR's average plant utilization to improve sharply from -10% YoY in 2012 to +12% YoY this year.

- **Wind power capacity expansion to pick up.** As power grid curtailment is lifted, we forecast the company will accelerate its capacity expansion to 800-1,000MW p.a. in 2013F-2015F versus 497MW in 2012.

- **Net profit to increase at a CAGR of 118% for 2013F-2015F**, after factoring in higher utilization and capacity. DTR has the highest earnings sensitivity to changes in utilization – a 1% increase in utilization could lift our earnings forecast by 5%.

- **Diminishing concerns over CDM income cancellation.** Due to a substantial decline in the floating price of CERs, we forecast DTR's CDM income will fall another 39% to RMB58m in 2013F. Given the contribution of CDM income to pre-tax profit will drop to only 6%, the impact to earnings appears insignificant.

Forecasts and valuation

Year to 31 December	2011	2012F	2013F	2014F	2015F
Revenue (RMB m)	3,805	4,360	5,494	6,624	7,822
Operating profit (EBIT) (RMB m)	2,429	2,114	3,043	3,760	4,527
Operating margin (%)	56.2	45.6	51.3	52.6	53.7
Net profit (RMB m)	730	112	617	846	1,155
EPS (HK$)	0.12	0.02	0.11	0.15	0.20
YoY change (%)	17.4	(84.5)	455.8	37.0	36.6
PE (x)	13.7	88.6	15.9	11.6	8.5
Dividend yield (%)	2.8	1.7	1.9	2.6	3.5
Price/book value (x)	1.10	1.13	1.06	0.99	0.91
ROE (%)	8.4	1.3	6.8	8.8	11.1
Net gearing (%)	264	314	344	351	362

Source: Company data, CCBIS estimates

Company Rating: Outperform
(initiation)

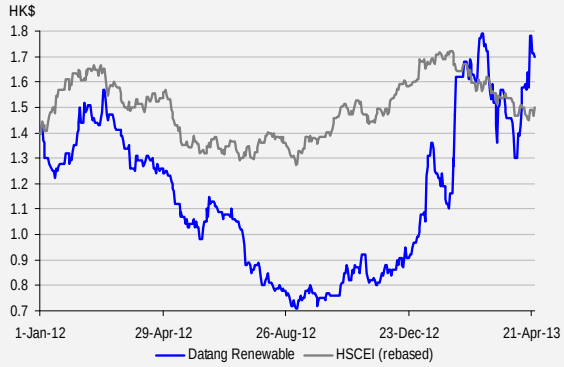
Price: HK$1.70
Target: HK$2.00
(initiation)

Trading data

52-week range	HK$0.71-1.86
Market capitalization (b)	HK$12.4/US$1.6
Shares outstanding (m)	7,274
Free float (%)	34
3M average daily T/O (m share)	16.7
3M average daily T/O (US$m)	3.2
Expected return – 1 year (%)	18

Price as at close on 24 April 2013

Stock price and HSCEI



Source: Bloomberg

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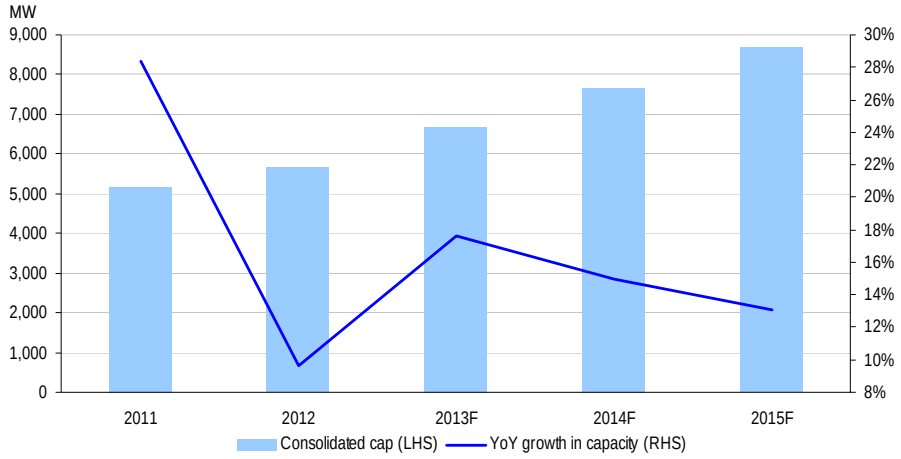
Highly leveraged on utilization recovery

Wind power capacity expansion to pick up

Newly added capacity will increase to 800-1,000M p.a. in 2013F-2015F vs. 497MW in 2012

Due to poor wind resources and high exposure to areas subject to power grid curtailment, DTR's net profit fell a substantial 85% YoY in 2012. During the year, the company's power grid curtailment ratio was up 6.6ppt YoY to 21.3%, equivalent to 2,279GWh in power generation that was not dispatched to the power grid. To mitigate the impact, the company slowed down its expansion, adding only 497MW wind power capacity in 2012 versus 1.1-1.4GW in 2010-2011. With an expectation that the curtailment will gradually lift in 2013F, DTR looks to accelerate its capacity expansion to 800-1,000MW per year in 2013F-2015F focusing on China's southeastern coastline where power grid networks are more developed and closer to areas with high power demand.

DTR – consolidated installed wind power capacity versus capacity growth



Source: Company data, CCBIS research

Relief of grid bottleneck provides potential upside to utilization

DTR has 50% of its 2012 newly installed capacity in Inner Mongolia and in northeastern China vs. 9% for HNR and 21% for Longyuan

Within the wind power sector, DTR has the largest percentage of wind farms in northeastern China and Inner Mongolia, the areas most affected by the power grid curtailment imposed in 2012. Although the company shifted its focus to other areas, the proportion of newly installed capacity in Inner Mongolia and the northeastern China still accounted for 50% of its total capacity added in 2012 versus only 9% for HNR and 21% for Longyuan. As such, the average wind power utilization for DTR fell 10% in 2012.

Wind power portfolio (end-December 2012)

	Huaneng Renewables		Datang Renewable		Longyuan	
	MW	% of total	MW	% of total	MW	% of total
Three northeastern provinces	1,148	21	1,275	22	2,452	23
Inner Mongolia	1,716	31	2,458	43	2,176	21
Southeastern coastal provinces	282	5	50	1	1,675	16
Gansu	–	0	394	7	1,039	10
Xinjiang	272	5	–	0	744	7
Hebei	249	5	50	1	971	9
Other	1,791	33	1,443	25	1,487	14
	5,458	100	5,669	100	10,544	100

Source: Company data, CCBIS research

Newly installed capacity in 2012

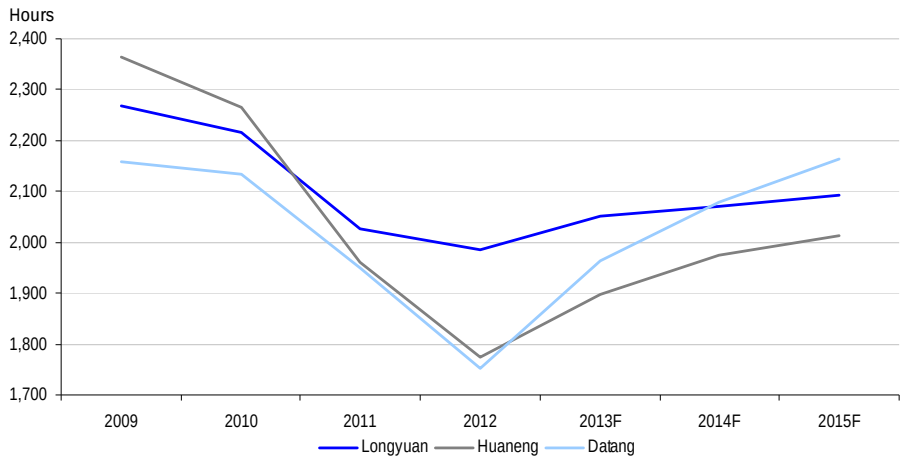
	Huaneng Renewables		Datang Renewable		Longyuan	
	MW	% of total	MW	% of total	MW	% of total
Three northeastern provinces	50	9	98	20	147	8
Inner Mongolia	–	0	149	30	248	13
Southeastern coastal provinces	198	36	50	10	328	17
Gansu	–	0	–	0	82	4
Xinjiang	99	18	–	0	297	15
Hebei	–	0	–	0	100	5
Other	207	37	201	40	744	38
	554	100	497	100	1,945	100

Source: Company data, CCBIS research

Average plant utilization will increase 12% in 2013F versus -10% in 2012

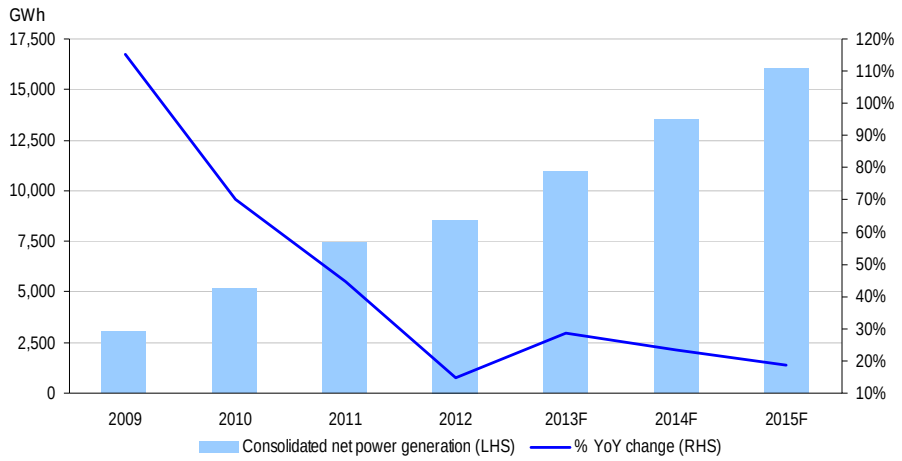
With an expectation that power grid curtailment will gradually lift in 2013F, especially in the northeastern China and Inner Mongolia, we forecast DTR's average plant utilization will improve sharply from 1,752 hours in 2012 to 1,962 hours in 2013F. Taking into account additional capacity to be brought online, we forecast DTR's consolidated power generation will increase 26% in 2013F versus +15% in 2012.

Comparison of average wind power utilization



Source: Company data, CCBIS research

DTR – consolidated net power generation



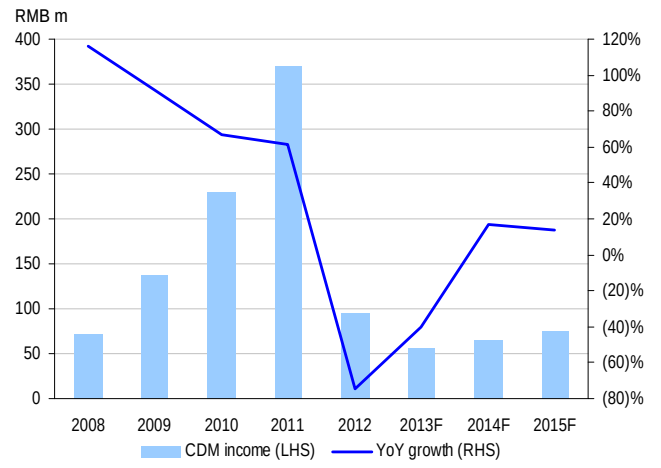
Source: Company data, CCBIS research

Diminishing concerns over CDM income cancellation

CDM income to pre-tax profits will decline to only 6% in 2013F versus 37-54% in 2011-2012

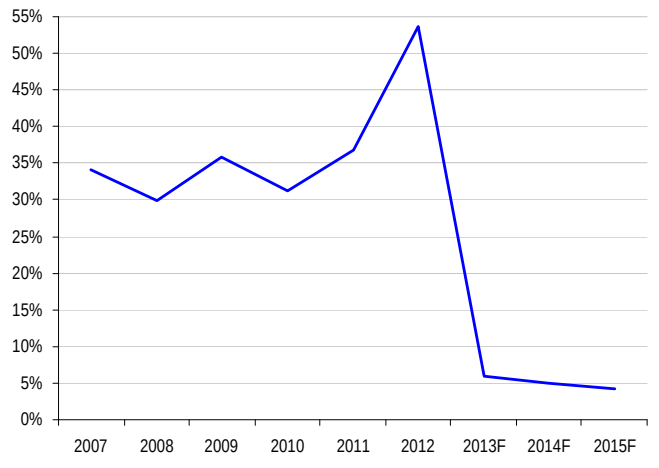
In 2012, DTR successfully registered 92 CDM projects with the United Nations Clean Development Mechanism Executive Board, increasing its total CDM projects to 142 and total registered capacity to 7.16GW (versus 4.24GW in 2011). However, due to a substantial decline in the floating price of CERs (-96% YoY to EUR0.18/tonne at end-2012), DTR's CDM income fell substantially by 75% YoY to RMB95m. Assuming the CER spot price remains flat until year end, we forecast DTR's CDM income will drop 39% to RMB58m in 2013F. Uncertainty on CER price has been a concern for DTR over the past two years given CDM income contributed 37-54% of its pre-tax profit in 2011-2012. We forecast the percentage of CDM income to pre-tax profit will drop to only 6% in 2013F, therefore, the impact to earnings appears insignificant.

DTR – CDM income forecast



Source: Company data, CCBIS research

DTR – percentage of CDM income to pre-tax profit

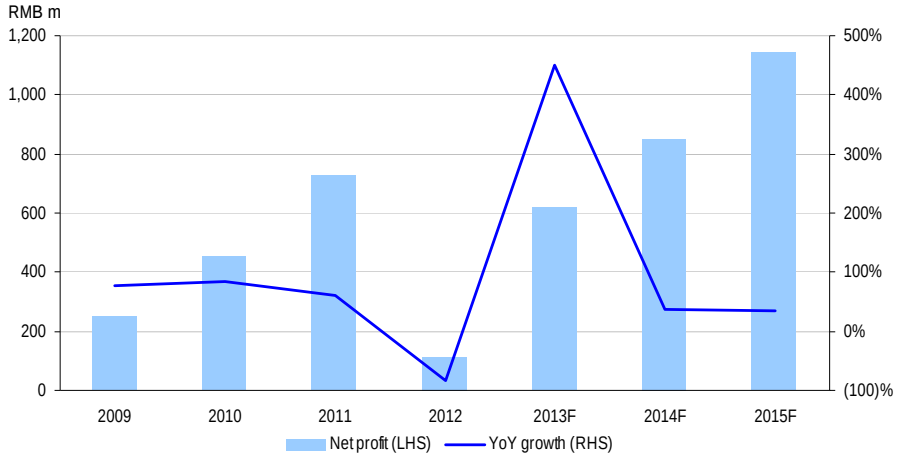


Source: Company data, CCBIS research

Net profit to increase at 118% CAGR in 2013F-2015F

Given the low earnings base in 2012, the planned capacity addition of 800MW and an expected improvement in plant utilization should drive DTR's earnings growth higher than Longyuan and HNR in 2013F. We forecast company earnings will increase 4.6x in 2013F, +37% in 2014F and +37% in 2015F.

DTR – net profit and YoY change in 2013F-2015F



Source: Company data, CCBIS research

The table below shows several key factors affecting DTR's earnings sensitivity to its wind power business. We estimate that a 1.0% difference in our wind power utilization assumptions would change our 2013F earnings forecasts by 5.4%. With no fuel cost risk for the wind power business, a 1.0% difference in our tariff assumptions would change our 2013F earnings forecasts by a similar magnitude (6.0%) compared with a 1.0% difference in our utilization assumptions. As contribution from CDM income is forecast to drop to only 6.0% of DTR's pre-tax profits in 2013F, down from 54.0% in 2012, a 10.0% difference in its CDM income would change our 2013F earnings forecasts by only 0.6%. As DTR's net gearing is likely to increase to 344% in 2013F, by our estimate, a 25bp difference in our interest rate assumptions would change our 2013F earnings projections by 8.5%.

DTR – earnings sensitivity factors

(%)	FY13 base case	Change	Impact to 2013F earnings
Change in average tariff	0.0	+/- 1	+/- 6.0
Change in plant utilization	22.4	+/- 1	+/- 5.4
Change in CDM income	RMB58m	+/- 10	+/- 0.6
Change in cost of debt	6.4	+/- 25bps	-/+ 8.5

Source: CCBIS research

Valuation and risks

We use a DCF valuation as our main valuation tool as it captures the time value of varied future cash flows in terms of a substantial amount of capex to be spent in the near term coupled with a rapid ramp-up of operating cash inflow after the commissioning of new wind power projects. Based on an 8.4% WACC, our HK$2.00 12-month DCF-based target implies 18% potential upside. We initiate on DTR with an Outperform rating on the shares.

DTR – target price calculation

Total DCF/share (2014-2020F) (HK$)	0.82
Terminal growth rate (%)	2.0
WACC (%)	8.4
Discount factor at 2020 (HK$)	0.57
RMB/HK$	0.80
DCF/share (terminal value in 2020F) (HK$)	9.06
Total DCF/share (HK$)	9.88
Less: net debt/share (end-2013)	(7.32)
	2.56
% shared by non-controlling shareholders	22.0
Less: value shared by MI	(0.56)
DCF/share (HK$)	2.00

Source: CCBIS research

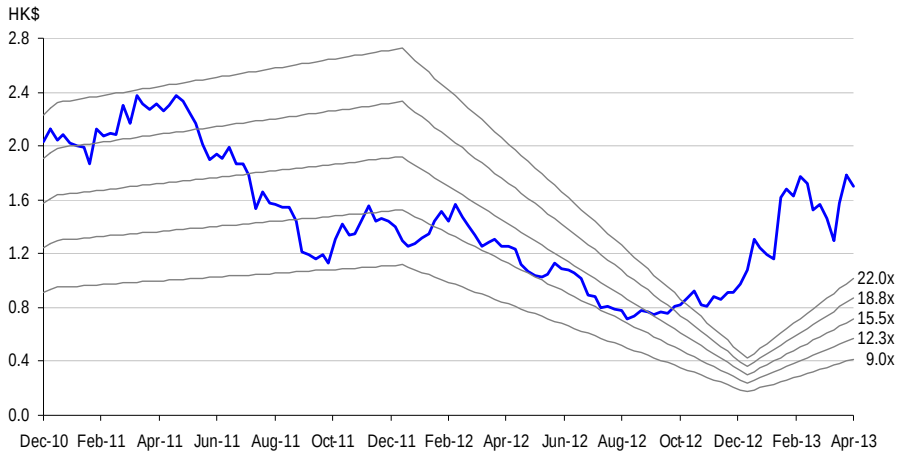
DTR – DCF sensitivity to WACC and terminal growth rate

Terminal growth rate \ WACC (%)	6.4	6.9	7.4	7.9	8.4	8.9	9.4	9.9	10.4
0.5	3.70	2.73	1.91	1.20	0.58	0.04	-0.44	(0.86)	(1.24)
1.0	4.54	3.42	2.48	1.68	0.99	0.39	-0.14	(0.60)	(1.01)
1.5	5.55	4.23	3.15	2.24	1.46	0.79	0.21	(0.30)	(0.75)
2.0	6.78	5.22	3.94	2.89	2.00	1.24	0.59	0.03	(0.47)
2.5	8.34	6.42	4.90	3.66	2.63	1.77	1.04	0.41	(0.14)
3.0	10.34	7.93	6.07	4.59	3.38	2.39	1.55	0.84	0.23
3.5	13.03	9.88	7.53	5.72	4.29	3.12	2.15	1.34	0.65

Source: CCBIS research

In terms of P/E valuation, DTR looks attractive, trading at 16x in 2013F (versus its two-year average of 20x) and with a high EPS CAGR of 118% in 2013F-2015F.

DTR – rolling P/E bands



Source: Company data, CCBIS research

DTR – rolling P/B bands

Source: Company data, CCBIS research

We believe the key downside risks to our target price include: (1) slower capacity expansion should power grid curtailment remain in place for the next three years; and (2) a higher-than-expected interest rate hike given the company's high net gearing. Upside risks include: (1) a rebound in CER price, driving higher CDM income; and (2) a substantial increase in utilization should the curtailment lift in Inner Mongolia, where a large number of DTR's wind farms are located.

How we differ from consensus

We believe the key catalysts for DTR's shares are: (1) achieving its target of 800MW in newly added capacity per year, and (2) a rebound in utilization of at least 12% in 2013F.

How we differ from consensus

Our 2013F-2015F earnings estimates are +17%, -5% and +15% different from consensus. We believe that the discrepancy is due to the market not yet factoring in substantial improvement in plant utilization in 2013F and a subsequent increase in plant utilization until 2015F once the curtailment lifts.

DTR – CCBIS's earnings forecast versus consensus

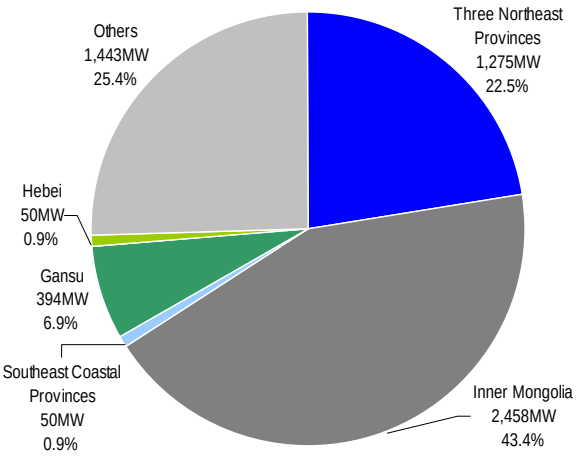
				CCBIS rating		
RMB m	2013F	2014F	2015F	Outperform	Neutral	Underperform
CCBI earnings forecast	617	846	1,155	Outperform		
YoY % change	*450*	*37*	*37*			
% difference from consensus	17	(5)	15			
Consensus earnings forecast	526	887	1,008	9	6	4
YoY % change	*369*	*69*	*14*			

Source: CCBIS research

Business summary

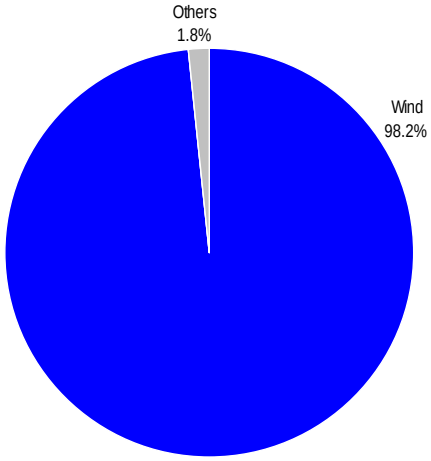
DTR is a subsidiary company of Datang Group (one of the Big Five power generating groups in China) and ranked second in terms of market share of wind power capacity in China by end-2012. Of its total consolidated wind power capacity of 5.7GW, around 75% is located in northeastern China, Inner Mongolia, the southeastern coastal provinces, Gansu, and Hebei.

DTR – attributable operational capacity by location



Source: Company data, CCBIS research

DTR – attributable operational capacity by type



Source: Company data, CCBIS research

DTR – key assumptions

	2011	2012	2013F	2014F	2015F
Consolidated capacity (MW)					
Wind power	5,172	5,669	6,469	7,369	8,369
% change	*28.4*	*9.6*	*14.1*	*13.9*	*13.6*
Consolidated net power generation (GWh)					
Wind power	7,233	8,293	10,488	12,675	14,993
% change	*49.6*	*14.7*	*26.5*	*20.9*	*18.3*
Average utilization hours					
Wind power	1,951	1,752	1,962	2,080	2,163
% change	*(8.6)*	*(10.2)*	*12.0*	*6.0*	*4.0*
Average tariff (excl. VAT) (RMB/MWh)					
Wind power	505	516	516	516	516
% change	*2.7*	*2.0*	*0.0*	*0.0*	*0.0*

Source: Company data, CCBIS estimates

DTR – consolidated income statement

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Revenue					
Sale of electricity – wind power	3,656	4,275	5,407	6,534	7,730
Other	148	85	87	90	92
	3,805	4,360	5,494	6,624	7,822
% change	*59.9*	*14.6*	*26.0*	*20.6*	*18.1*
Other net income					
CDM	371	95	58	66	75
Government grants	185	134	355	429	507
Other	(37)	49	31	32	33
	518	277	444	528	615
% change	*40.6*	*(46.5)*	*60.0*	*18.9*	*16.6*
Less: operating costs					
Depreciation and amortization	(1,361)	(1,857)	(2,123)	(2,501)	(2,882)
Labour costs	(188)	(265)	(306)	(353)	(407)
Repair and maintenance	(69)	(83)	(96)	(112)	(129)
Material costs	(30)	(24)	(27)	(32)	(36)
Other	(246)	(294)	(341)	(395)	(456)
	(1,894)	(2,523)	(2,894)	(3,392)	(3,910)
% change	*52.0*	*33.2*	*14.7*	*17.2*	*15.3*
Operating profit (EBIT)	2,429	2,114	3,043	3,760	4,527
% change	*61.6*	*(13.0)*	*43.9*	*23.5*	*20.4*
Operating profit margin	56.2	45.6	51.3	52.6	53.7
Net interest expenses	(1,431)	(1,933)	(2,070)	(2,406)	(2,725)
Share of associates	8	(5)	(8)	(9)	(11)
Profit before taxation	1,005	176	966	1,345	1,790
Tax	(35)	10	(107)	(202)	(269)
Profit after taxation	970	187	859	1,142	1,521
Non-controlling interests	(240)	(74)	(242)	(297)	(366)
Net profit	730	112	617	846	1,155
% change	*60.1*	*(84.6)*	*450.2*	*37.0*	*36.6*

Source: Company data, CCBIS estimates

DTR – consolidated cash-flow statement

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Operating activities					
Net cash from operations	2,542	4,396	4,342	8,125	7,988
Taxes paid	(67)	10	(107)	(202)	(269)
Interest received	10	39	29	31	31
	2,485	4,445	4,264	7,954	7,750
Investing activities					
(Increase)/decrease in fixed assets	(10,469)	(6,757)	(7,991)	(9,310)	(10,665)
Other	(1,199)	0	(7)	(9)	(10)
	(11,667)	(6,757)	(7,998)	(9,318)	(10,675)
Financing activities					
Shares issues/(repurchases), net	240	0	0	0	0
Capital contributions from equity owners	40	0	0	0	0
Increase/(decrease) in bank loans	3,429	2,981	6,700	4,500	6,200
Increase/(decrease) from owner and NCI	215	(100)	78	86	92
Dividend paid to equity owners	(100)	(284)	(167)	(185)	(254)
Interest paid	(1,666)	(2,343)	(2,652)	(3,010)	(3,352)
Other	6,292	0	0	0	0
	8,449	254	3,958	1,391	2,686
Increase/(decrease) in cash	(733)	(2,059)	507	26	(239)
Cash at beginning of year	5,031	4,162	2,104	2,611	2,637
Effect on FX change	(136)	0	0	0	0
Cash at end of year	4,162	2,104	2,611	2,637	2,398

Source: Company data, CCBIS estimates

DTR – consolidated balance sheet

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Current assets					
Inventories	12	14	16	19	22
Trade and other receivables	7,489	5,219	8,240	9,500	11,115
Current income tax prepayment	15	25	25	(256)	(486)
Restricted deposits	29	10	10	10	10
Cash and cash equivalents	4,162	2,104	2,611	2,637	2,398
	11,708	7,372	10,902	11,910	13,058
Non-current assets					
Property, plant and equipment	41,111	44,855	51,517	58,101	65,627
Intangible assets	422	417	662	808	974
Investment in associates and JCE	83	278	277	276	275
Other	958	3,461	784	872	973
	42,575	49,011	53,241	60,058	67,849
Total assets	54,283	56,383	64,143	71,968	80,908
Current liabilities					
Accounts payable and other payables	7,141	6,484	7,635	8,902	10,206
Short-term bank borrowing	5,667	5,457	5,457	7,058	7,945
Other	22	24	130	179	244
	12,830	11,964	13,222	16,138	18,395
Non-current liabilities					
Bank loans	29,514	32,705	38,447	42,304	47,617
Other	203	217	208	217	228
	29,717	32,922	38,655	42,521	47,845
Non-controlling interests	2,647	2,681	3,001	3,383	3,841
Equity and reserves	9,089	8,816	9,265	9,926	10,827
Total equity and liabilities	54,283	56,383	64,143	71,968	80,908

Source: Company data, CCBIS estimates

DTR – key financial ratios

Year to 31 December	2011	2012	2013F	2014F	2015F
EPS (HK$)	0.12	0.02	0.11	0.15	0.20
EPS growth (%)	*17.4*	*(84.5)*	*455.8*	*37.0*	*36.6*
P/E (x)	13.7	88.6	15.9	11.6	8.5
DPS (HK$)	0.05	0.03	0.03	0.04	0.06
DPS growth (%)	*191.3*	*(40.5)*	*11.8*	*37.0*	*36.6*
Yield (%)	2.8	1.7	1.9	2.6	3.5
Cash earnings/share (HK$)	0.35	0.34	0.47	0.58	0.70
P/CE (x)	4.8	5.0	3.6	2.9	2.4
BV/share (HK$)	1.5	1.5	1.6	1.7	1.9
P/BV (x)	1.1	1.1	1.1	1.0	0.9
EV (HK$m)	50,604	57,206	65,439	71,061	79,152
EBITDA (HK$m)	4,686	4,933	6,482	7,854	9,296
EV/EBITDA (x)	10.8	11.6	10.1	9.0	8.5
Net debt/(cash) (HK$m)	30,990	36,048	42,241	46,715	53,154
Net debt/equity (%)	264.1	313.6	344.4	351.0	362.4
Interest cover (x)	1.7	1.1	1.5	1.6	1.7
ROE (%)	8.4	1.3	6.8	8.8	11.1

Source: Company data, CCBIS estimates

Huadian Power (1071 HK)

The most leverage on lower coal price

- **Initiate with an Outperform rating and HK$5.00 target price.** Our DCF-based target price for Huadian Power suggests 21% potential upside. The company's 2013F P/E of 8x also looks attractive given its high EPS CAGR of 38% for 2013F-2015F. Huadian's high earnings sensitivity to changes in coal cost means a 1% extra reduction in unit fuel cost could result in a 9% increase in our earnings forecast.
- **Diversifying into non-coal-fired capacity.** Based on Huadian's pipeline of projects under construction, 8GW capacity (51% for non-coal-fired capacity) will commence operation in 2013F-2015F, increasing attributable capacity to 37GW by 2015F. Assuming Huadian's average plant utilization dips 2% in 2013F, we forecast a rebound in its consolidated power generation growth from 4% in 2012 to 9%.
- **Margin expansion to continue.** We expect the price of coal to remain weak in the coming years. We factor in -6%, 0% and +2% for our 2013F-2015F unit fuel cost assumptions. Given that coal cost accounted for 71% of the firm's operating costs in 2012, Huadian's operating margin should improve from 12% in 2012 to 15-16% in 2013F-2015F.
- **Declining net gearing ratio.** On the assumption that improvement in operating cash inflows will continue in the coming years, we forecast Huadian's net gearing will continue to decline, falling from 405% in 2012 to 341% in 2015F. This should lower the company's earnings sensitivity to interest rate changes.

Forecasts and valuation

Year to 31 December	2011	2012	2013F	2014F	2015F
Revenue (RMB m)	54,178	59,080	64,781	71,341	77,441
Operating profit (RMB m)	3,155	6,983	9,849	10,884	12,443
Operating margin (%)	5.8	11.8	15.2	15.3	16.1
Net profit (RMB m)	74	1,447	2,957	3,244	3,904
EPS (HK$)	0.01	0.25	0.50	0.55	0.67
YoY change (%)	(54.4)	1,792.4	98.0	9.7	20.3
P/E (x)	306.3	16.2	8.2	7.5	6.2
Dividend yield (%)	–	2.0	4.1	4.4	5.3
Price/book value (x)	1.4	1.2	1.1	1.0	0.9
ROE (%)	0.5	8.1	14.3	14.1	15.2
Net gearing (%)	429	405	389	375	341

Source: Company data, CCBIS estimates

Company Rating: Outperform
(initiation)

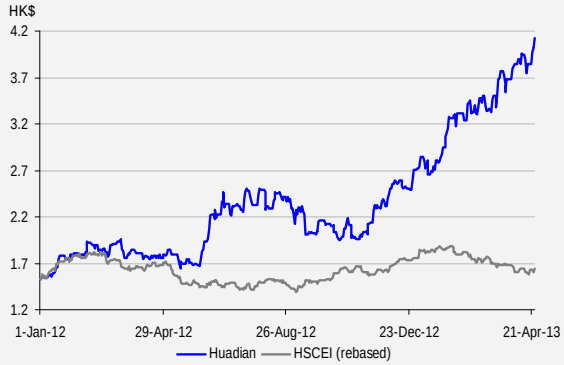
Price: HK$4.12
Target: HK$5.00
(initiation)

Trading data

52-week range	HK$1.63-3.99
Market capitalization (b)	HK$37.0/US$4.8
Shares outstanding (m)	7,371
Free float (%)	41
3M average daily T/O (m share)	11.0
3M average daily T/O (US$m)	4.8
Expected return – 1 year (%)	21

Price as at close on 24 April 2013

Stock price and HSCEI



Source: Bloomberg

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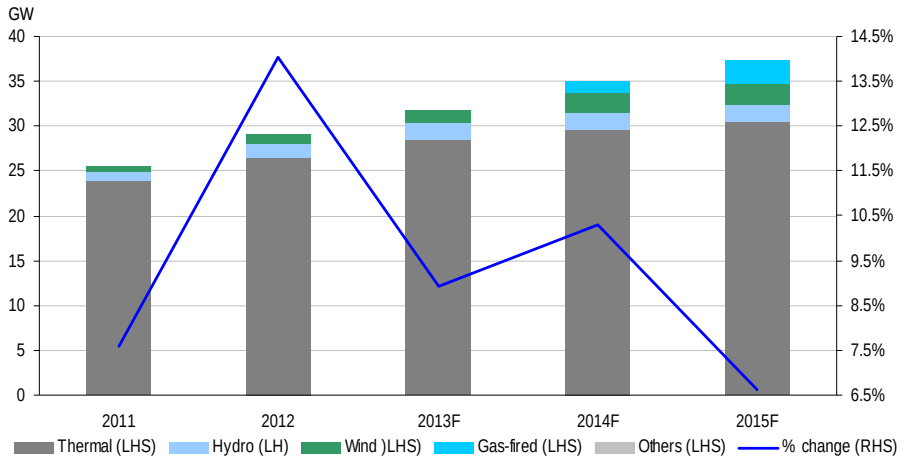
The most leverage on lower coal price

Diversifying into non-coal-fired capacity

As at end-2012, Huadian had attributable capacity of 29GW. Based on the company's pipeline of projects under construction, around 8GW capacity will come into effect in 2013F-2015F, increasing attributable capacity to 37GW by 2015F. Of this total, non-coal-fired capacity will account for 51% of greenfield projects, which is a testament to the company's diversified portfolio.

Huadian – attributable capacity forecast

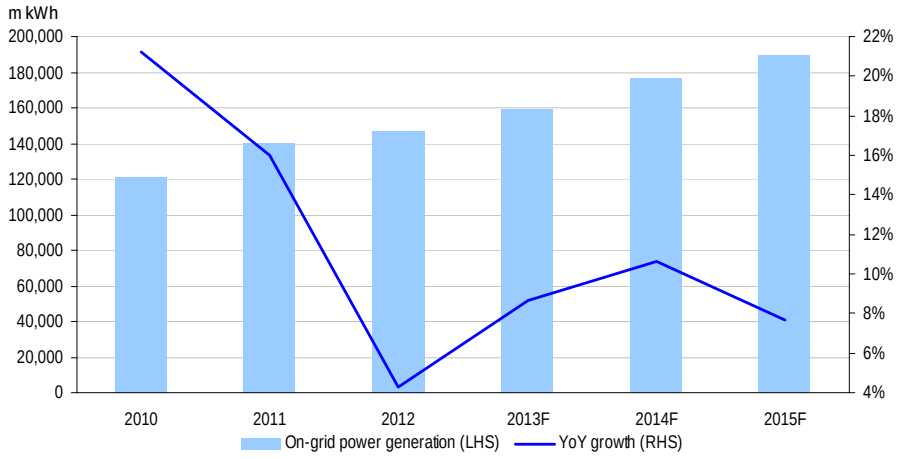


Source: Company data, CCBIS research

Power generation growth will rebound from 4% in 2012 to 9% in 2013F

On the assumption that power generating capacity growth (+9%) will outstrip electricity consumption in China (7-8%), we forecast average utilization for Huadian's coal-fired capacity will decline slightly by 0.4% in 2013F. Taking into account the full commissioning of new capacity in 2012 and new capacity coming into play in 2013F, we forecast Huadian's consolidated power generation growth will rebound from 4% in 2012 to 9% in 2013F.

Huadian – consolidated on-grid power generation forecast



Source: Company data, CCBIS research

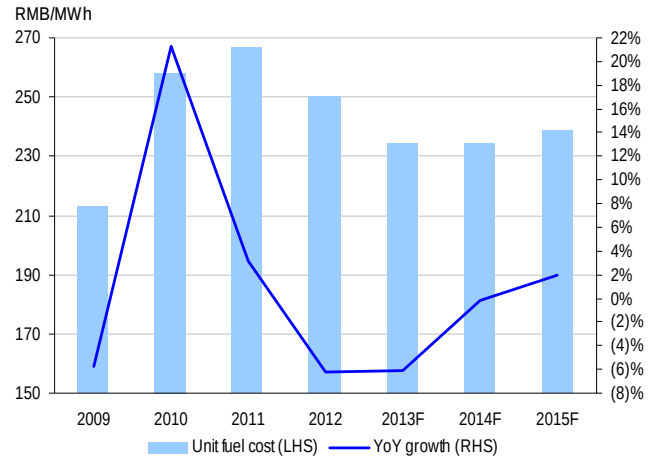
Margin expansion to continue

Unit fuel cost decline could help Huadian lift operating margin to 15% in 2013F

Since the beginning of 2013, spot price for Qinhuangdao 5,500kCal thermal coal declined marginally from RMB620/tonne to RMB610/tonne. On a year-on-year basis, it fell 22%. Management has guided that if the current spot coal price remains flat for the rest of the year, unit fuel cost for Huadian could drop 10% YoY. Given the majority of Huadian's coal supply was delivered via railway and trucks, the price change for coal transported via rail and trucks that Huadian purchases is not as sensitive as the spot coal price in Qinhuangdao. We factor in a conservative 6% decline in unit fuel cost for the company in 2013F. For 2014F, we assume the company's unit fuel cost will remain flat and then in 2015F increase by 2%.

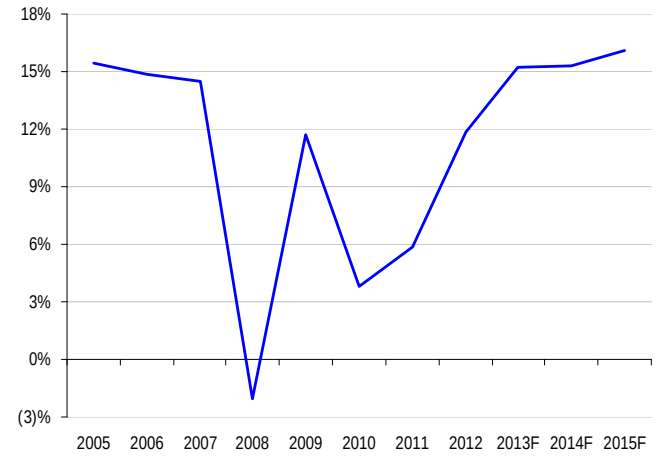
As coal costs accounted for 71% of Huadian's operating costs in 2012, any decline in unit fuel costs will substantially improve its profit margin. We forecast Huadian's operating margin will expand from 12% in 2012 to 15% in 2013F, which is comparable to its level in 2005-2007.

Huadian – fuel cost per coal-fired power generation



Source: Company data, CCBIS research

Huadian – operating margin forecast



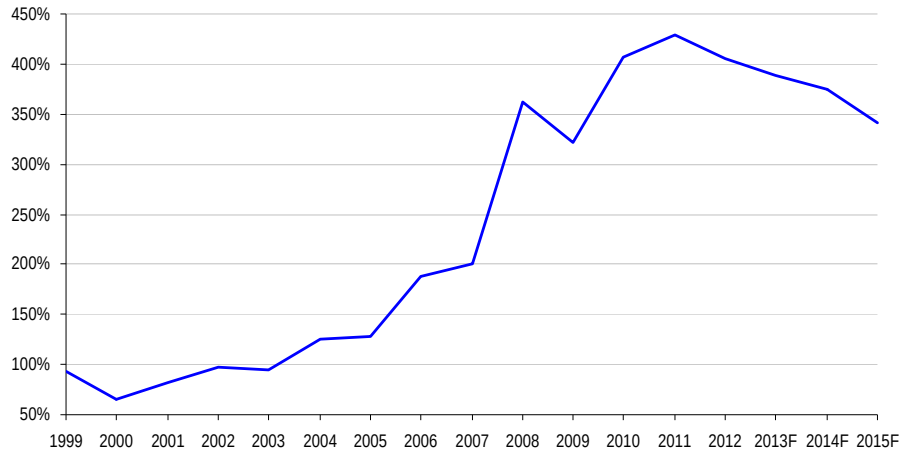
Source: Company data, CCBIS research

Lowering net gearing ratio

Net debt to equity will drop from the peak of 429% in 2011 to 341% in 2015F

High net gearing has been a concern for Huadian over the past few years. As benefited from improved profitability, it was the first time Huadian reported a decline in net gearing since 1999. With an expectation that improvement in operating cash inflows will continue in the coming years on softer prices, we forecast Huadian's net gearing will decline further from 405% in 2012 to 389% in 2013F, 375% in 2014F and then to 341% in 2015F. With each decline in net gearing, the company's earnings sensitivity to changes in interest rate should also decline accordingly.

Huadian – net gearing (1999-2015F)



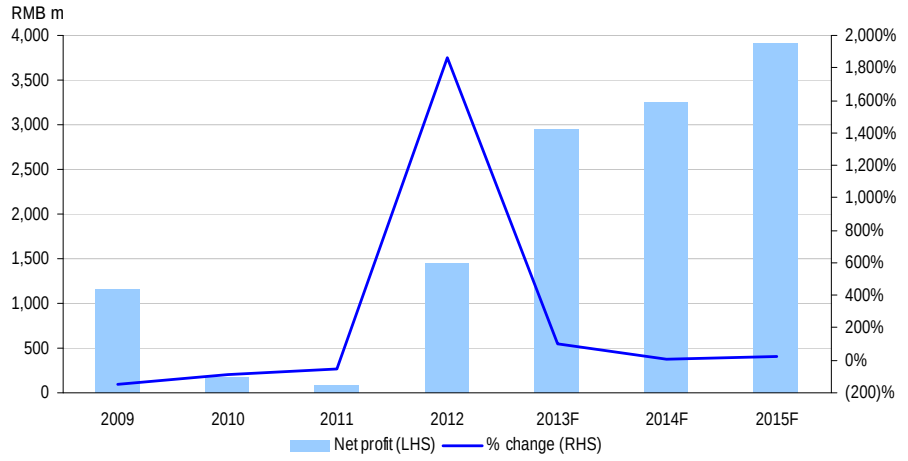
Source: Company data, CCBIS research

Earnings growth to accelerate

We forecast Huadian's net profit to increase 104%, 10% and 20% in 2013F-2015F

We conservatively assume Huadian's fuel cost per coal-fired power generation will drop 6% in 2013F, remain flat in 2014F and then increase 2% in 2015F. To reflect the weak coal price outlook, we assume no tariff hike for Huadian in 2013F-2014F and an increase of only 1.2% in 2015F. As power demand for the country is expected to remain weak in the near term, we assume the company's average plant utilization will drop 2% in 2013F. Our forecasts have Huadian's net profit increasing 104% in 2013F, 10% in 2014F and 20% in 2015F.

Huadian – net profit and YoY change in 2013F-2015F



Source: Company data, CCBIS research

The table below shows our estimates of Huadian's earnings sensitivity to key drivers. Compared with other coal-fired IPPs, Huadian has the highest earnings sensitivity to key drivers given its low profit margin (net margin of 2.4% in 2012 versus 4.1-12.0% for peers). Our analysis shows that a 1% change to our tariff assumption would change our 2013F earnings by 13%, which is higher than the earnings sensitivity for a 1% difference in unit fuel costs (8%) as Huadian's 2013F turnover is 1.7x its fuel costs. We estimate a 1ppt difference in power plant utilization would change our 2013F earnings forecast by 8%. A 25bp difference in our interest rate assumption would change our 2013F earnings forecast by 5%.

Huadian – earnings sensitivity to key drivers

Earnings drivers (%)	FY13 base case	Change	Impact on earnings
Growth in average tariff	0.0	+/- 1	+/- 13.1
Growth in unit fuel cost	(6.1)	+/- 1	-/+ 8.1
Average plant utilization	53.9	+/- 1	+/- 8.2
Interest rate	6.4	+/- 25bps	-/+ 5.2

Source: CCBIS research

Valuation and risks

Our DCF-based target price of HK$5.00 suggests 21% potential upside

We initiate coverage on Huadian with an Outperform rating and a target price of HK$5.00. We employ DCF valuation to derive our target price, as this valuation method captures the time value of the company's varied future cash flows, i.e. negative free cash flows in near term due to capacity expansion. Free cash flows will turn positive after the commissioning of new capacity and on the improving profitability of existing power plants. Based on a WACC of 8.1%, our DCF-based target price of HK$5.00 suggests 21% potential upside.

Huadian – target price calculation

Total DCF/share (2014F-2020F) (HK$)	7.78
Terminal growth rate (%)	1.0
WACC (%)	8.1
Discount factor	0.58
RMB/HK$	0.80
DCF/share (terminal value in 2020F) (HK$)	18.93
Total DCF/share (HK$)	26.70
Less: net debt(cash)/share (end-2013F)	(20.75)
	5.95
% shared by minority shareholders	16
Less: value shared by minority interest	(0.95)
DCF/share (HK$)	5.00

Source: CCBIS research

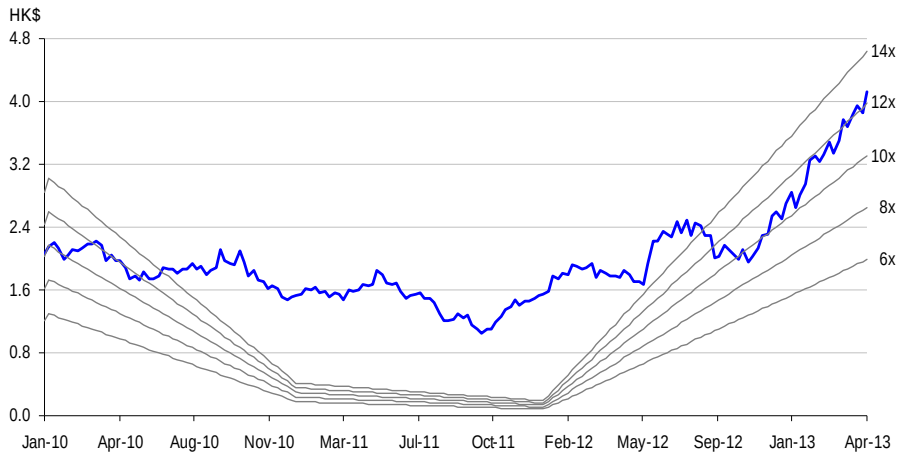
Huadian – DCF sensitivity to terminal growth rate

		WACC (%)								
		6.1	6.6	7.1	7.6	8.1	8.6	9.1	9.6	10.1
Terminal growth rate	0.0	10.60	8.23	6.20	4.44	2.90	1.54	0.33	(0.75)	(1.72)
	0.5	12.58	9.87	7.57	5.59	3.88	2.38	1.06	(0.11)	(1.16)
	1.0	14.95	11.79	9.15	6.92	5.00	3.34	1.88	0.60	(0.54)
	1.5	17.84	14.10	11.03	8.46	6.29	4.43	2.81	1.40	0.15
	2.0	21.43	16.90	13.26	10.28	7.79	5.68	3.87	2.30	0.93
	2.5	26.02	20.39	15.99	12.46	9.56	7.14	5.09	3.33	1.81
	3.0	32.09	24.85	19.38	15.11	11.68	8.86	6.51	4.52	2.81

Source: CCBIS research

In terms of P/E valuation, Huadian is trading at a P/E of only 8x in 2013F with a high EPS CAGR of 38% in 2013F-2015F. Although its current P/B of 1.1x is above its four-year average of 0.9x, we believe that it is justified as we forecast its ROE will improve from 1-8% in 2009-2012 to 14% in 2013F.

Huadian – rolling P/E bands



Source: Company data, CCBIS research

Huadian – rolling P/B bands

Source: Company data, CCBIS research

We believe that the key downside risks to our target price include: (1) further declines in plant utilization due to the slowing economy, (2) a lower-than-expected decline in unit fuel costs, and (3) a higher-than-expected interest rate hike given Huadian's high net gearing.

Catalysts for shares

We believe the key catalysts for Huadian's shares are: (1) achieving its target of a 5-7% decline in unit fuel cost, (2) stable plant utilization, and (3) capacity expansion coming back on track.

How we differ from consensus

Our 2013F-2015F earnings estimates are 16%, 14% and 4% above consensus for 2013F-2015F. The discrepancy is mainly because we have factored in a higher decline in unit fuel cost and because of its high earnings sensitivity towards changes in fuel costs.

Huadian – CCBIS' earnings forecast versus consensus

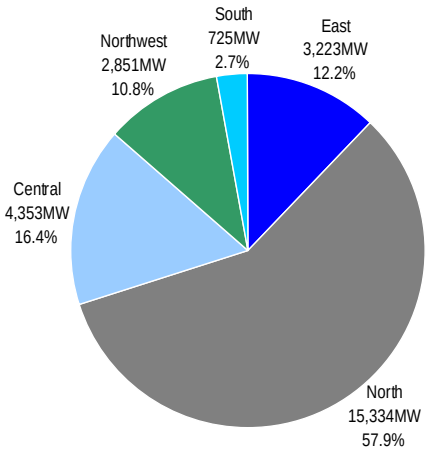
				CCBI rating		
RMB m	2013F	2014F	2015F	Outperform	Neutral	Underperform
CCBI earnings forecast	2,957	3,244	3,904	Outperform		
YoY % change	*104*	*10*	*20*			
% difference to consensus	16	14	4			
Consensus earnings forecast	2,539	2,834	3,761	15	7	2
YoY % change	*75*	*12*	*33*			

Source: CCBIS research

Business summary

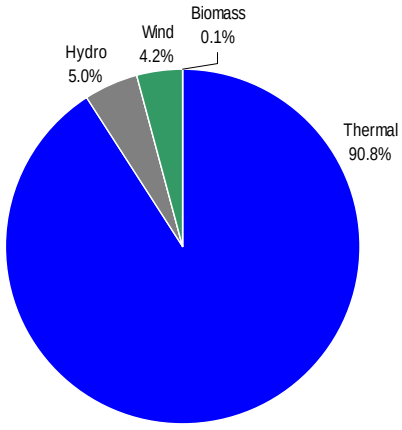
Huadian is the flagship power company of China Huadian Corporation, one of the Big Five power generating groups in China. By the end of 2012, it has an attributable capacity of 29GW, with nearly half of its power plants located in Shandong (42% of the total). Besides the coal-fired power business, hydropower power and wind power are important businesses to Huadian, accounting for 9% of its attributable capacity at end-2012.

Huadian – attributable operational capacity by location



Source: Company data, CCBIS research

Huadian – attributable operational capacity by type



Source: Company data, CCBIS research

Huadian – key assumptions

Year to 31 December	2011	2012	2013F	2014F	2015F
Power generating capacity (MW)					
Total installed capacity	34,652	38,646	41,904	45,612	48,362
% change	*7.9*	*11.5*	*8.4*	*8.8*	*6.0*
Consolidated installed capacity	31,919	35,913	39,171	42,869	44,019
% change	*13.5*	*12.5*	*9.1*	*9.4*	*2.7*
Attributable capacity – total	25,585	29,175	31,782	35,052	37,376
% change	*7.6*	*14.0*	*8.9*	*10.3*	*6.6*
Power generation volume (m kWh)					
Consolidated on-grid generation	140,540	146,600	159,273	176,181	189,694
% change	*16.0*	*4.3*	*8.6*	*10.6*	*7.7*
Plant utilization (hours)					
Consolidated coal-fired plant utilization	5,134	4,745	4,725	4,999	5,082
% change	*2.3*	*(7.6)*	*(0.4)*	*5.8*	*1.7*
Tariff ex-VAT (RMB/MWh)					
Average consolidated plant tariff	363.8	377.5	377.5	377.5	382.1
% change	*1.3*	*3.8*	*0.0*	*0.0*	*1.2*
Fuel cost per coal-fired power generation (RMB/MWh)					
Average consolidated unit fuel cost	266.5	249.9	234.6	234.2	238.8
% change	*3.2*	*(6.2)*	*(6.1)*	*(0.1)*	*2.0*

Source: Company data, CCBIS estimates

Huadian – consolidated income statement

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Operating revenue	54,178	59,080	64,781	71,341	77,441
% change	*19.9*	*9.0*	*9.6*	*10.1*	*8.5*
Less: operating costs					
Coal consumption	(38,871)	(37,095)	(37,332)	(40,853)	(43,437)
Depreciation and amortization	(5,574)	(6,283)	(7,278)	(8,042)	(9,117)
Wages and staff welfare	(2,460)	(2,809)	(3,156)	(3,557)	(3,762)
Repair and maintenance	(1,324)	(1,962)	(2,204)	(2,485)	(2,628)
Selling and administration	(1,304)	(1,830)	(2,047)	(2,333)	(2,587)
Sales related taxes	(198)	(250)	(278)	(316)	(348)
Other	(1,291)	(1,868)	(2,636)	(2,872)	(3,119)
	(51,023)	(52,096)	(54,932)	(60,457)	(64,998)
% change	*17.4*	*2.1*	*5.4*	*10.1*	*7.5*
Operating profit (EBIT)	3,155	6,983	9,849	10,884	12,443
% change	*82.8*	*121.3*	*41.0*	*10.5*	*14.3*
Operating profit margin	5.8	11.8	15.2	15.3	16.1
Interest income	66	65	72	73	78
Investment income	725	480	104	109	114
Other income	653	751	789	828	870
Share of associates	557	646	662	765	817
Finance costs	(4,991)	(6,288)	(6,869)	(7,512)	(8,203)
Profit before taxation	165	2,637	4,606	5,147	6,118
Tax	(30)	(690)	(1,152)	(1,287)	(1,530)
Profit after taxes	135	1,948	3,455	3,861	4,589
Non-controlling interests	(61)	(501)	(498)	(617)	(685)
Net profit	74	1,447	2,957	3,244	3,904
% change	*(56.6)*	*1,860.1*	*104.4*	*9.7*	*20.3*

Source: Company data, CCBIS estimates

Huadian – consolidated cash flow statement

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Cash generated from operations					
Net cash from operations	6,847	13,080	16,651	20,037	22,838
Taxes paid	(114)	(690)	(1,152)	(1,287)	(1,530)
Interest paid	(5,670)	(6,872)	(7,306)	(7,860)	(8,128)
Net cash provided by operating activities	1,063	5,519	8,193	10,891	13,180
Investing activities					
(Increase)/decrease in fixed assets	(12,314)	(16,720)	(17,711)	(17,341)	(13,235)
(Increase)/decrease in associates and subsidiaries	(1,711)	(688)	(688)	(320)	(320)
Interest received	65	64	71	72	77
Other	826	944	530	612	654
	(13,135)	(16,400)	(17,798)	(16,977)	(12,825)
Financing activities					
Increase/(decrease) in NCI	146	333	588	141	61
Increase/(decrease) in loans	13,487	11,192	9,500	7,000	1,000
Dividends paid	0	0	(479)	(979)	(1,074)
Other	(685)	304	0	0	0
	12,948	11,829	9,609	6,162	(13)
Increase/(decrease) in cash	876	948	4	75	342
Cash at beginning of year	1,236	2,112	3,060	3,064	3,139
Cash at end of year	2,112	3,060	3,064	3,139	3,481

Source: Company data, CCBIS estimates

Huadian – consolidated balance sheet

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Current assets					
Inventories	2,778	3,383	3,405	3,726	3,962
Trade and other receivables	7,707	10,598	11,620	12,820	13,916
Fixed deposits	363	42	42	42	42
Cash and cash equivalents	2,112	3,060	3,064	3,139	3,481
Other	43	75	126	141	167
	13,002	17,159	18,258	19,868	21,568
Non-current assets					
Property, plant and equipment	115,534	127,319	139,269	148,637	152,823
Interest in associates and JCE	10,445	10,001	10,821	11,294	11,778
Other	10,078	10,743	10,630	10,511	10,764
	136,057	148,062	160,721	170,442	175,364
Total assets	149,059	165,221	178,978	190,311	196,932
Current liabilities					
Trade, bills and other payables	14,791	15,066	15,886	17,484	18,797
Bank loans	28,895	25,177	28,188	30,407	30,724
Other loans	6,413	3,961	3,961	3,961	3,961
Debentures	3,551	11,664	11,664	11,664	11,664
Other	352	544	888	956	1,077
	54,004	56,413	60,588	64,473	66,224
Non-current liabilities					
Bank loans	50,705	54,259	60,748	65,529	66,212
Other loans	11,029	9,915	9,915	9,915	9,915
Debentures	3,864	10,353	10,353	10,353	10,353
Other	5,657	6,551	6,081	5,725	6,337
	71,255	81,078	87,096	91,522	92,817
Non-controlling interests	7,515	8,286	9,372	10,129	10,876
Equity and reserves	16,285	19,444	21,922	24,187	27,016
Total equity and liabilities	149,059	165,221	178,978	190,311	196,932

Source: Company data, CCBIS estimates

Huadian – key financial ratios

Year to 31 December	2011	2012	2013F	2014F	2015F
EPS (HK$)	0.013	0.255	0.504	0.553	0.665
EPS growth (%)	(54.4)	1,792.4	98.0	9.7	20.3
P/E (x)	306.3	16.2	8.2	7.5	6.2
DPS (HK$)	0.000	0.081	0.167	0.183	0.220
DPS growth (%)	NM	NM	106.4	9.7	20.3
Yield (%)	0.0	2.1	4.1	4.4	5.3
Cash earnings/share (HK$)	1.029	1.360	1.745	1.924	2.220
P/CE (x)	4.0	3.0	2.4	2.1	1.9
BV/share (HK$)	2.97	3.42	3.74	4.12	4.61
P/BV (x)	1.39	1.20	1.10	1.00	0.89
EV (HK$m)	153,734	169,969	183,311	192,012	192,838
EBITDA (HK$m)	13,158	18,836	23,472	25,919	29,352
EV/EBITDA (x)	11.7	9.0	7.8	7.4	6.6
Net debt (HK$m)	104,489	125,838	139,600	152,942	161,643
Net debt/equity (%)	428.5	404.7	389.0	374.9	341.3
Interest cover (x)	0.6	1.1	1.4	1.5	1.5
ROE (%)	0.5	8.1	14.3	14.1	15.2

Source: Company data, CCBIS estimates

Huaneng Power (902 HK)

Improving balance sheet for expansion

- **Initiate with Outperform and a HK$10.00 target price.** Our DCF-based target price for Huaneng suggests 14% potential upside. The company's 2013F P/E of 10.5x looks attractive given high EPS CAGR of 27% for 2013F-2015F.
- **Earnings to increase 70% in 2013F** after factoring in a decline in unit fuel cost and lower average plant utilization in 2013F. Profit contribution from the domestic power business should increase from 81% in 2012 to 90% in 2013F. We forecast Huaneng will have above average profit margin relative to the sector. Its earnings sensitivity to key drivers is not as high as other power companies like Huadian.
- **Free cash flows to remain positive.** Decline in unit fuel cost helped Huaneng generate positive free cash flows in 2012. Although Huaneng budgets an increase in 2013F capex to 37% YoY, given our expectation of substantial improvement in operating cash inflows on a weaker coal price outlook, its free cash flows should remain positive in 2013F-2015F. Net gearing is likely to decline from 238% in 2012 to 183% in 2015F, according to our forecast.
- **Upside on capacity forecast.** Based on Huaneng's project pipelines under construction, its controllable capacity is on track to increase from 64GW in 2012 to 70GW by 2015F, just short of its target of 80GW capacity. Should net gearing decline as expected, Huaneng will have room to expand capacity, which would imply upside to our earnings forecasts.

Forecasts and valuation

Year to 31 December	2011	2012	2013F	2014F	2015F
Revenue (RMB m)	132,937	133,295	135,384	140,089	149,288
Operating profit (RMB m)	8,748	16,957	21,811	22,928	24,115
Operating margin (%)	6.6	12.7	16.1	16.4	16.2
Net profit (RMB m)	1,181	5,512	9,364	10,156	11,094
EPS (HK$)	0.10	0.49	0.84	0.91	0.99
YoY change (%)	(68.1)	370.7	71.6	8.5	9.2
P/E (x)	84.9	18.0	10.5	9.7	8.9
Dividend yield (%)	0.7	3.0	5.1	5.5	6.0
Price/book value (x)	2.0	1.8	1.6	1.5	1.3
ROE (%)	2.3	10.3	15.8	15.6	15.7
Net gearing (%)	266	238	215	199	183

Source: Company data, CCBIS estimates

Company Rating: Outperform
(initiation)

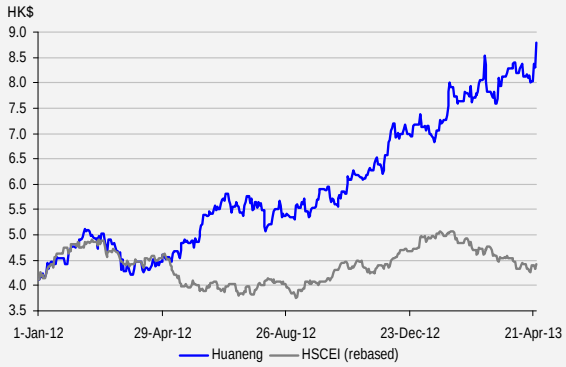
Price: HK$8.80
Target: HK$10.00
(initiation)

Trading data

52-week range	HK$4.38-8.84
Market capitalization (b)	HK$118.0/US$15.2
Shares outstanding (m)	14,055
Free float (%)	48
3M average daily T/O (m share)	19.9
3M average daily T/O (US$m)	20.3
Expected return – 1 year (%)	14

Price as at close on 24 April 2013

Stock price and HSCEI



Source: Bloomberg

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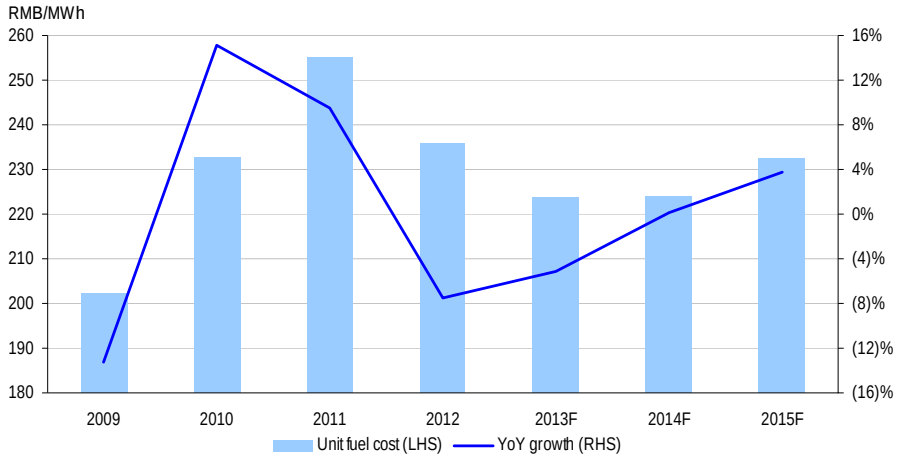
Improving balance sheet to accelerate expansion

Free cash flows to remain positive in the coming years

We forecast a 5% decline in unit fuel cost in 2013F, flat fuel cost in 2014F and a 4% rise in 2015F

Huaneng procured 133m tonnes of raw coal in 2012. As a result of a slump in the domestic spot coal price, Huaneng's fuel cost per unit of power sold declined 7.6% in the year. For 2013F, management plans to procure 140m tonnes of raw coal, with 40-50m tonnes based on contracts that are RMB10/tonne below the spot coal price. The company targets a 5% YoY decline in fuel cost per unit of power generation in 2013F. We believe that this target is achievable given the domestic spot coal price fell 22% YoY. We factor in a conservative 5% decline in unit fuel cost for the company in 2013F, flat unit fuel cost in 2014F and a 4% rise in 2015F.

Huaneng – fuel cost per coal-fired power generation

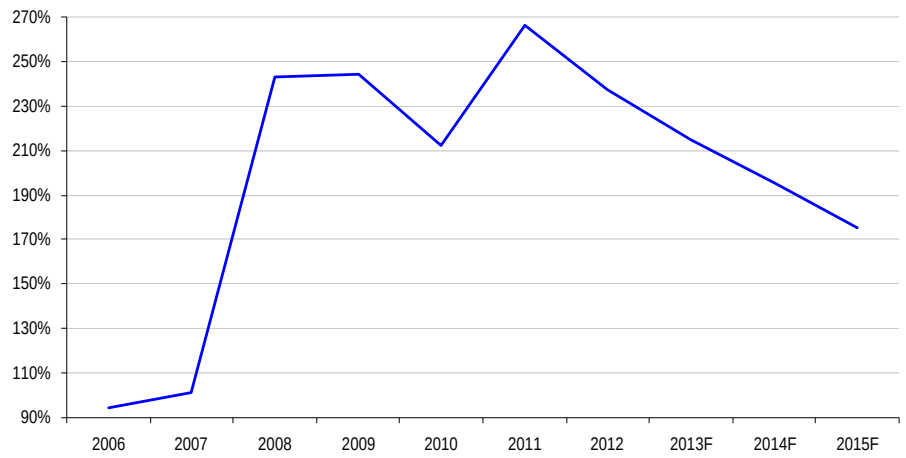


Source: Company data, CCBIS research

Net gearing will decline from 238% in 2013F to 176% in 2015F, in our view

Last year, was the first year Huaneng had positive free cash flow since 2003. Huaneng budgets a 2013F capex increase of 37% YoY to RMB21b. As we expect the company to see a substantial improvement in operating cash inflow, its free cash flow should remain positive in 2013F and lead to lower net gearing, from 238% in 2012 to 215%. On the assumption coal prices remain weak in 2014F and that there will be a return to modest economic growth in 2015F, we believe Huaneng's net gearing will see further declines, to 195% in 2014F and to 176% in 2015F.

Huaneng – net debt to equity (1999-2015F)



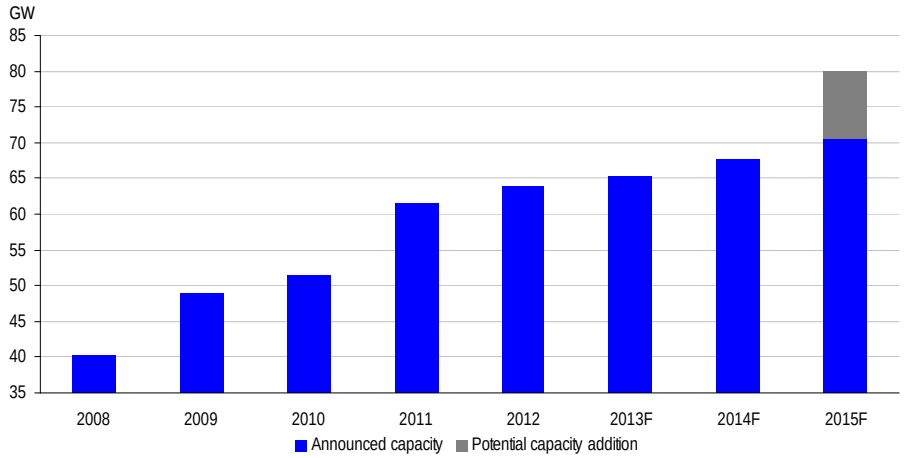
Source: Company data, CCBIS research

Upside to our capacity forecast for Huaneng

Huaneng targets 80GW capacity by end-2015 versus our forecast for 70GW

Huaneng had controllable and attributable power generating capacity of 64GW and 57GW, respectively, as at end-2012. By the end of 2015F, it plans to have 80GW controllable capacity. Based on its project pipelines under construction, around 7.6GW capacity will come online in 2013F-2016F, leading to an increase in controllable capacity to 71GW by 2016F. On our assumption that Huaneng's net gearing will continue to decline over the coming years, we expect the company to have further room to expand capacity, which accounts for the potential upside to our earnings forecasts.

Huaneng – controllable capacity forecast



Source: Company data, CCBIS research

Less dependence on overseas business

In 2011, Tuas Energy was an earnings driver for Huaneng, contributing RMB1,282m in net profit to Huaneng versus Huaneng's net profit of RMB1,180m for the year. The situation changed in 2012 after Tuas Energy suffered a decline in market share in the Singapore power market after the commissioning of new generating units by other power plant companies. Net profit contribution from Tuas Energy fell 19% YoY to RMB1,041m and accounted for 19% of Huaneng's net profit in 2012.

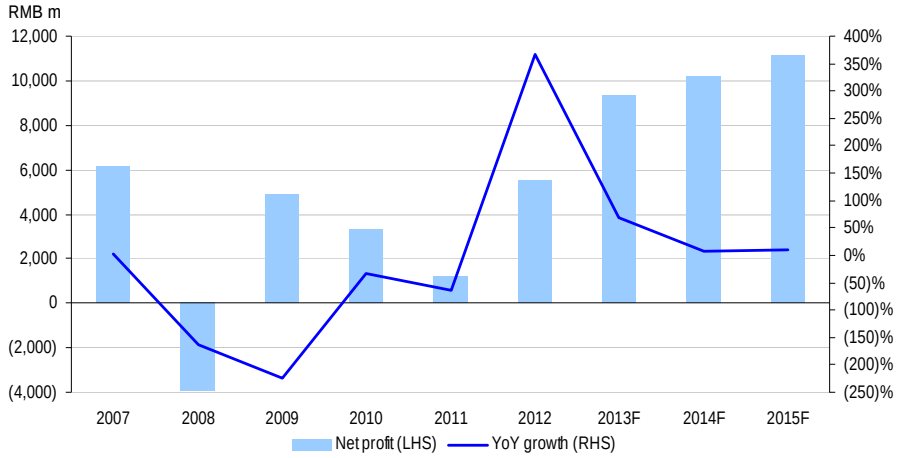
With more new capacity (2,500MW) to be commissioned in Singapore this year and with more natural gas supply available after the opening of a new LNG terminal in mid-2013F, we expect profit contribution from Tuas Energy to see further declines. We forecast a sharp increase in earnings from the domestic power business in 2013F coinciding with a 10% decline in percentage profit contribution from Tuas Energy.

Earnings to increase substantially in 2013F

We forecast an increase in Huaneng's net profit of 70%, 9% and 9% in 2013F-2015F

We conservatively assume a 5% decline in Huaneng's fuel cost per domestic coal-fired power generation in 2013F, flat fuel cost in 2014F and a 4% increase in 2015F. To reflect the poor outlook for coal prices, we assume no tariff hike for Huaneng in 2013F-2014F and a meager 2% increase in 2015F. As we expect power demand for the country to remain weak in the near term, we assume average plant utilization will decline 2% in 2013F. We forecast the company's net profit will increase 70% in 2013F, 9% in 2014F and 9% in 2015F.

Huaneng – net profit and YoY change in 2013F-2015F



Source: Company data, CCBIS research

The table below shows our estimates for Huaneng's earnings sensitivity to key drivers. Due to Huaneng's above average profit margin within the sector, its earnings sensitivity is not high compared with rival Huadian. Our analysis shows that a 1% change in our tariff assumption would change our 2013F earnings by 8%. As Huaneng's 2013F turnover is 1.7x of its fuel costs, its earnings sensitivity to a 1% change in unit fuel costs is lower at 5%. We estimate a 1ppt difference in power plant utilization would change our 2013F earnings forecast by 5%. A 25bp difference in our interest rate assumption would change our 2013F earnings forecast by 3%.

Huaneng – earnings sensitivity to key drivers

Earnings drivers (%)	FY13 base case	Change	Impact on earnings
Growth in average tariff	0.0	+/- 1	+/- 8.2
Growth in unit fuel cost	(5.1)	+/- 1	-/+ 5.0
Average plant utilization	56.8	+/- 1	+/- 5.0
Interest rate	5.8	+/- 25bp	-/+ 3.0

Source: CCBIS research

Valuation and risks

Our DCF-based target price of HK$10.00 suggests 14% potential upside

We initiate coverage on Huaneng with an Outperform rating and HK$10.00 target price. We employ DCF valuation to derive our target price, as this valuation method captures the time value of the company's varied future cash flows, namely the pickup in free cash flow in the near term due to the decline in coal price and potential value added from newly approved greenfield projects. Based on a WACC of 8.0%, our DCF-based target price of HK$10.00 suggests 14% potential upside.

Huaneng – target price calculation

Total DCF/share (2014F-2020F) (HK$)	8.19
Terminal growth rate (%)	1.0
WACC (%)	8.0
Discount factor	0.58
RMB/HK$	0.80
DCF/share (terminal value in 2020) (HK$)	17.72
Total DCF/share (HK$)	25.91
Less: net debt(cash)/share (end-2013F)	(14.00)
	11.91
% shared by minority shareholders	0.16
Less: value shared by minority interest	(1.91)
DCF/share (HK$)	10.00

Source: CCBIS research

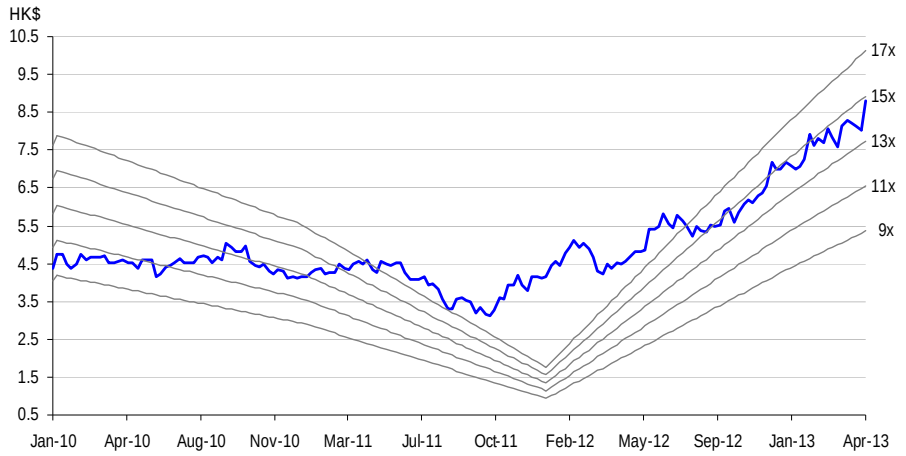
Huaneng – DCF sensitivity to terminal growth rate

		WACC (%)								
		6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
Terminal growth rate	0.0	15.3	13.1	11.1	9.5	8.0	6.7	5.6	4.6	3.7
	0.5	17.2	14.6	12.4	10.6	8.9	7.5	6.3	5.2	4.2
	1.0	19.4	16.4	13.9	11.8	10.0	8.4	7.1	5.9	4.8
	1.5	22.2	18.6	15.7	13.3	11.2	9.5	7.9	6.6	5.4
	2.0	25.7	21.3	17.9	15.0	12.7	10.7	8.9	7.5	6.2
	2.5	30.1	24.7	20.5	17.1	14.3	12.0	10.1	8.4	7.0
	3.0	36.0	29.0	23.7	19.6	16.4	13.7	11.5	9.6	8.0

Source: CCBIS research

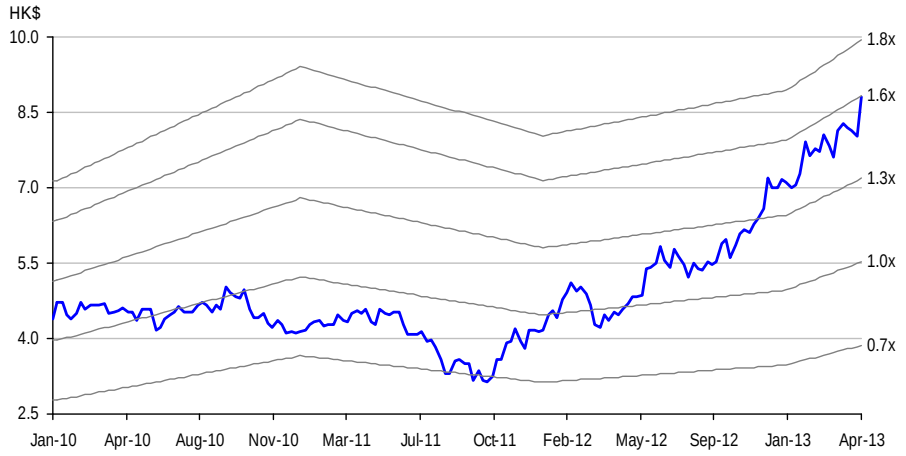
Huaneng is currently trading at a P/E of 10.5x in 2013F with a high EPS CAGR of 27% in 2013F-2015F. For Huaneng to trade at our target price of HK$10.00, it would have to trade at a P/E of only 12x for 2013F. Although its current P/B of 1.6x is above its five-year average of 1.2x, it appears justified to us as we forecast its ROE will improve from -9% to 13% in 2008-2012 and to 16% in 2013F.

Huaneng – rolling P/E bands



Source: Company, CCBIS research

Huaneng – rolling P/B bands



Source: Company, CCBIS research

We believe that the key downside risks to our target price include: (1) further declines in plant utilization due to the economic slowdown, (2) lower-than-expected declines in unit fuel costs, and (3) higher-than-expected interest rate hikes given Huaneng's high net gearing.

Catalysts for shares

We believe the key catalysts for Huaneng's shares are: (1) the company achieving its goal of a 5% decline in unit fuel cost, (2) stabilized plant utilization, and (3) capacity expansion coming back on track.

How we differ from consensus

Our earnings forecasts for Huaneng are 4%, 4% and -4% different from consensus for 2013F-2015F. We attribute the discrepancies mainly to our forecast that there will be a bigger decline in unit fuel cost than market forecasts in 2013F-2014F. For 2015F, we have been more conservative in forecasting the company's capacity expansion by only including those projects that have already begun construction.

Huaneng – CCBIS's earnings forecasts vs. consensus

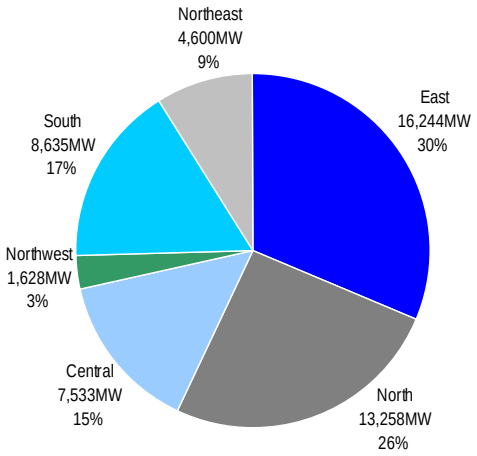
				CCBI rating		
RMB m	2013F	2014F	2015F	Outperform	Neutral	Underperform
CCBI earnings forecast	9,364	10,156	11,094	Outperform		
YoY % change	*70*	*8*	*9*			
% difference to consensus	4	4	(4)			
Consensus earnings forecast	8,993	9,753	11,523	20	5	3
YoY % change	*63*	*8*	*18*			

Source: CCBIS research

Business summary

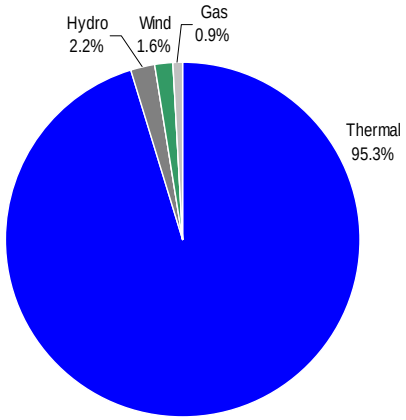
Huaneng is the flagship power company of Huaneng International Power Development Corporation, one of the Big Five power generating groups in China. At the end of 2012, it had attributable capacity of 57GW (55GW in China and 2GW in Singapore). Within the sector, Huaneng's domestic power plants portfolio is more diversified than most other power companies, with 32% in eastern China, 27% in northern China, 17% in southern China, 13% in central China, 9% in northeastern China and 3% in northwestern China. The percentage breakdown in fuel-type is as follows: coal-fired power accounted for the largest proportion at 94.2%, followed by wind power at 2.5%, hydropower at 2.1%, gas-fired power at 0.9% and biomass at 0.3%.

Huaneng – attributable operational capacity by location



Source: Company data, CCBIS research

Huaneng – attributable operational capacity by type



Source: Company data, CCBIS research

Huaneng – key assumptions

Year to 31 December	2011	2012	2013F	2014F	2015F
Power generating capacity (MW)					
Total installed capacity	72,907	75,127	76,447	78,927	81,747
% change	*16.4*	*3.0*	*1.8*	*3.2*	*3.6*
Consolidated installed capacity	61,637	63,857	65,177	67,657	70,477
% change	*20.0*	*3.6*	*2.1*	*3.8*	*4.2*
Attributable capacity	55,119	56,614	57,934	60,267	62,940
% change	*16.8*	*2.7*	*2.3*	*4.0*	*4.4*
Power generation volume (m kWh)					
Consolidated on-grid generation	313,554	302,433	313,280	324,364	340,860
% change	*22.0*	*(3.5)*	*3.6*	*3.5*	*5.1*
Attributable on-grid generation	303,214	292,952	303,182	313,647	329,143
% change	*21.6*	*(3.4)*	*3.5*	*3.5*	*4.9*
Plant utilisation (hours)					
Consolidated plant utilisation	5,273	4,903	4,972	4,953	4,990
% change	*1.0*	*(7.0)*	*1.4*	*(0.4)*	*0.7*
Tariff ex-VAT (RMB/MWh)					
Average consolidated plant tariff	372	393	393	393	401
% change	*2.8*	*5.7*	*0.0*	*0.0*	*2.0*
Fuel cost per generation (RMB/MWh)					
Average consolidated unit fuel cost	255.0	235.8	223.7	224.1	232.5
% change	*9.5*	*(7.5)*	*(5.1)*	*0.2*	*3.8*

Source: Company data, CCBIS estimates

Huaneng – consolidated income statement

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Operating revenue	132,937	133,295	135,384	140,089	149,288
% change	*27.6*	*0.3*	*1.6*	*3.5*	*6.6*
Less: operating costs					
Fuel	(90,546)	(82,355)	(80,034)	(82,923)	(89,801)
Purchase of electricity	(8,613)	(7,102)	(6,392)	(6,583)	(6,781)
Depreciation	(11,867)	(11,033)	(11,295)	(10,959)	(10,910)
Labor	(4,622)	(5,112)	(5,300)	(5,591)	(5,920)
Maintenance	(2,529)	(2,847)	(2,960)	(3,132)	(3,325)
Service fees to HIPDC	(141)	(141)	(148)	(156)	(166)
Other	(5,872)	(7,748)	(7,445)	(7,817)	(8,270)
	(124,189)	(116,338)	(113,574)	(117,161)	(125,173)
% change	*30.0*	*(6.3)*	*(2.4)*	*3.2*	*6.8*
Operating profit (EBIT)	8,748	16,957	21,811	22,928	24,115
% change	*1.4*	*93.8*	*28.6*	*5.1*	*5.2*
Operating profit margin	6.6	12.7	16.1	16.4	16.2
Interest income	166	175	187	184	189
Interest expense	(7,736)	(8,897)	(8,930)	(8,917)	(8,778)
Exchange gain/(losses)	76	(167)	(167)	(167)	(167)
Total financial expenses	(7,494)	(8,888)	(8,910)	(8,899)	(8,756)
Share of associates	704	622	641	660	680
Other income, net	93	186	195	205	215
Profit before taxation	2,050	8,877	13,737	14,894	16,255
Tax	(869)	(2,510)	(3,983)	(4,329)	(4,737)
Profit after taxation	1,181	6,366	9,754	10,565	11,518
Non-controlling interests	(1)	(854)	(391)	(409)	(424)
Net profit	1,181	5,512	9,364	10,156	11,094
% change	*(64.7)*	*367.0*	*69.9*	*8.5*	*9.2*
Net profit margin	0.9	4.1	6.9	7.3	7.4

Source: Company data, CCBIS estimates

Huaneng – consolidated cash flow statement

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Operating activities					
Net cash from operations	21,458	27,431	33,375	34,552	35,620
Taxes paid	(605)	(605)	(3,983)	(4,329)	(4,737)
Interest received	96	101	108	106	109
	20,949	26,928	29,500	30,329	30,992
Investing activities					
(Increase)/decrease in fixed assets	(16,588)	(13,674)	(17,178)	(15,147)	(15,127)
(Increase)/decrease in subsidiaries	(4,724)	(345)	(355)	(366)	(377)
Other	(353)	(1,292)	165	(161)	(182)
	(21,665)	(15,310)	(17,368)	(15,674)	(15,685)
Financing activities					
Increase/(decrease) in loans	11,445	321	(792)	(1,200)	(2,000)
Increase/(decrease) in NCI	99	(120)	177	36	34
Interest paid	(8,145)	(9,185)	(9,204)	(9,191)	(9,060)
Dividends paid	(2,807)	(703)	(2,952)	(5,014)	(5,439)
Other	(523)	(130)	0	0	0
	70	(9,817)	(12,771)	(15,370)	(16,465)
Increase/(decrease) in cash	(646)	1,801	(639)	(714)	(1,159)
Exchange gain/(loss)	(228)	151	0	0	0
Cash at beginning of year	9,426	8,553	10,505	9,866	9,152
Cash at end of year	8,553	10,505	9,866	9,152	7,993

Source: Company data, CCBIS estimates

Huaneng – consolidated balance sheet

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Current assets					
Accounts receivables	27,504	25,313	24,725	25,593	27,396
Cash and cash equivalents	8,553	10,505	9,866	9,152	7,993
Other	361	269	175	175	175
	36,417	36,086	34,765	34,919	35,563
Non-current assets					
Property, plant and equipment	177,968	177,014	185,759	189,947	194,165
Investment in associates	13,588	14,597	15,636	16,706	17,808
Goodwill	13,890	14,418	13,890	13,890	13,890
Other	15,552	16,986	16,605	16,643	16,706
	220,999	223,014	231,890	237,187	242,569
Total assets	257,416	259,100	266,656	272,106	278,132
Current liabilities					
Trade and other payables	25,768	19,993	19,518	20,134	21,511
Short-term loans	43,979	27,442	27,442	27,942	27,942
Short-term bonds	10,262	35,450	35,450	35,450	35,450
Bank loans	8,774	8,774	8,774	8,774	8,538
Other loans	5,367	283	283	283	283
Other	2,448	1,653	2,394	2,579	2,806
	96,598	93,594	93,861	95,162	96,530
Non-current liabilities					
Bank loans	78,179	65,815	65,815	65,815	64,050
Other loans	19,521	29,634	28,842	27,142	27,142
Other	3,561	4,096	5,198	5,460	5,768
	101,261	99,546	99,855	98,417	96,961
Non-controlling interests	8,675	9,830	10,398	10,842	11,300
Equity and reserves	50,883	56,130	62,542	67,685	73,341
Total equity and liabilities	257,416	259,100	266,656	272,106	278,132

Source: Company data, CCBIS estimates

Huaneng – key financial ratios

Year to 31 December	2011	2012	2013F	2014F	2015F
EPS (HK$)	0.10	0.49	0.84	0.91	0.99
EPS growth (%)	(68.1)	370.7	71.6	8.5	9.2
P/E (x)	84.9	18.0	10.5	9.7	8.9
DPS (HK$)	0.06	0.26	0.45	0.49	0.53
DPS growth (%)	(73.8)	323.4	71.6	8.5	9.2
Yield (%)	0.7	3.0	5.1	5.5	6.0
Cash earnings/share (HK$)	1.15	1.46	1.85	1.89	1.97
P/CE (x)	7.7	6.0	4.8	4.7	4.5
BV/share (HK$)	4.47	4.97	5.59	6.05	6.56
P/BV (x)	1.97	1.77	1.57	1.45	1.34
EV (HK$m)	319,146	318,699	320,477	319,867	318,810
EBITDA (HK$m)	25,436	34,817	41,596	42,578	44,008
EV/EBITDA (x)	12.0	8.9	7.6	7.4	7.1
Net debt (HK$m)	158,407	156,773	156,620	156,135	155,293
Net debt/equity (%)	266.0	237.7	214.7	198.8	183.5
Interest cover (x)	1.2	1.9	2.5	2.6	2.8
ROE (%)	2.3	10.3	15.8	15.6	15.7

Source: Company data, CCBIS estimates

Huaneng Renewables (958 HK)

Improving grid curtailment not in price

- **Accelerating wind power capacity expansion.** To mitigate the impact of power grid curtailment, Huaneng Renewables (HNR) slowed down its pace of expansion last year and adding only 554MW wind power capacity, of which 80% is located in the southeastern coastal provinces where there are no grid bottleneck issues. Working under the assumption that power grid curtailment will gradually improve, HNR targets acceleration in capacity expansion to 1GW p.a. by 2015F.
- **Plant utilization to recover strongly**. The company has wide exposure to areas with high curtailment rates, such as Inner Mongolia and northeastern China. As power grid curtailment is lifted, we forecast an increase in HNR's average plant utilization of 7% YoY in 2013F versus -10% in 2012.
- **Diminishing concerns over CDM income cancellation.** Due to a substantial decline in the floating price of CERs and after the expiry of fixed price contracts by end-2012, we conservatively assume HNR's CDM income to drop 57% in 2013F. We forecast the contribution of CDM income to pre-tax profit will decline from 17% in 2012 to only 3% in 2013F. In this scenario, the impact to earnings would be negligible.
- **Initiate with an Outperform rating and HK$3.00 target price** offering 18% potential upside. In terms of 2013F P/E valuation, the company is trading at 14x and with a high EPS CAGR of 49% for 2013F-2015F.

Forecasts and valuation

Year to 31 December	2011	2012F	2013F	2014F	2015F
Revenue (HK$m)	3,196	4,027	5,583	6,942	8,055
Operating profit (EBIT) (HK$m)	2,351	2,172	3,209	4,091	4,667
Operating margin (%)	60.6	51.5	55.8	56.8	55.8
Net profit (HK$m)	1,023	558	1,254	1,638	1,838
EPS (HK$)	0.17	0.08	0.19	0.24	0.27
YoY change (%)	61.9	(52.6)	127.0	30.6	12.2
P/E (x)	14.6	30.9	13.6	10.4	9.3
Dividend yield (%)	–	0.7	1.7	2.2	2.4
Price/book value (x)	1.5	1.5	1.3	1.2	1.1
ROE (%)	12.3	4.8	10.1	12.0	12.2
Net gearing (%)	152	194	228	248	259

Source: Company data, CCBIS estimates

Company Rating: Outperform
(initiation)

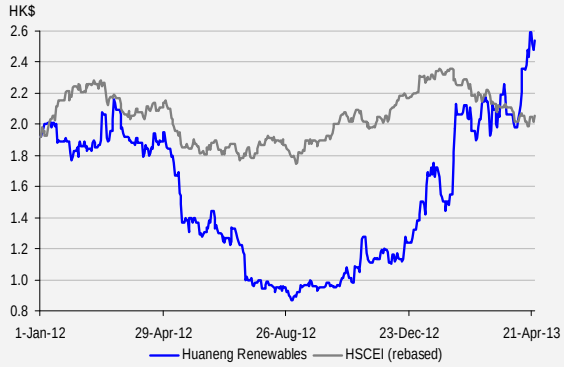
Price: HK$2.54
Target: HK$3.00
(initiation)

Trading data

52-week range	HK$0.87-2.62
Market capitalization (b)	HK$21.5/US$2.8
Shares outstanding (m)	8,447
Free float (%)	31
3M average daily T/O (m share)	25.2
3M average daily T/O (US$m)	6.4
Expected return – 1 year (%)	18

Price as at close on 24 April 2013

Stock price and HSCEI



Source: Bloomberg

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Improving grid curtailment not in price

Accelerating wind power capacity expansion

Affected by poor wind resources and power grid curtailment, HNR's net profit fell sharply by 46% YoY in 2012. To mitigate the impact, the company slowed down the pace of its expansion efforts, adding only 554MW wind power capacity in 2012 versus 1.1-2.0GW capacity added per year in 2009-2011. In addition, HNR shifted its focus to add capacity in southern China and eastern China, as these areas have well-developed power grid infrastructure; hence, no grid bottleneck issues and higher wind power tariffs. In 2012, the proportion of newly added capacity in China's southeast coastal provinces increased significantly from 38% in 2011 to 80%.

HNR – newly added capacity by location

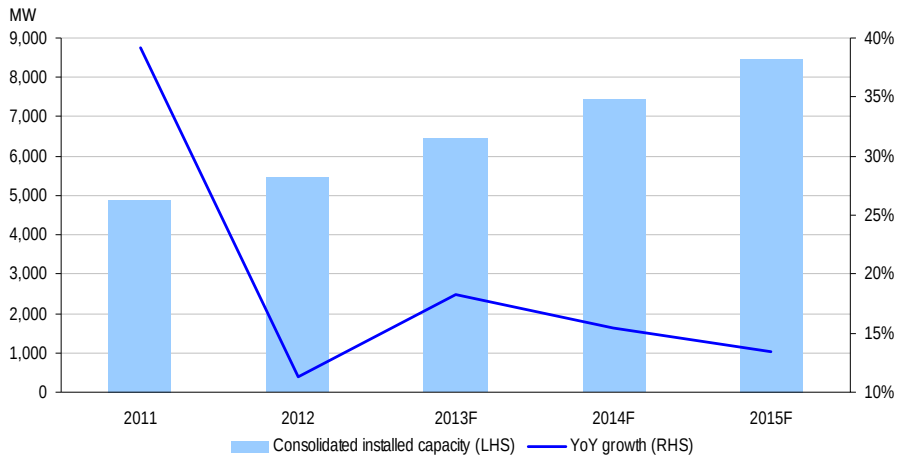
	2011 capacity (MW)	% of total	2012 capacity (MW)	% of total
Northeastern China + Inner Mongolia	447	32	50	9
Eastern China	158	11	99	18
Southern China	371	27	347	63
Northern China	398	29	50	9
Xinjiang	0	0	0	0
Other	9	1	9	2
	1,382	100	554	100

Source: Company data, CCBIS research

We forecast HNR will add 1GW capacity p.a. in 2013F-2015F versus only 554MW in 2012

Presuming power grid curtailment will gradually improve in 2013F, HNR targets accelerating capacity expansion to 1GW per year in 2013-2015F from 554MW last year. Most of the newly added capacity will be in Guangdong, Guizhou, Yunnan, Shanxi and Sichuan.

HNR – consolidated installed wind power capacity versus capacity growth



Source: Company data, CCBIS research

Plant utilization to recover strongly

Within the sector, HNR has a high percentage of its wind farms located in northeastern China and Inner Mongolia, the provinces most impacted by power grid curtailments in 2012. Although the company shifted its focus to developing new wind power capacity in other areas where power grid curtailment was not as severe, average wind power utilization for the company still fell 10% last year.

Wind power portfolio (end-December 2012)

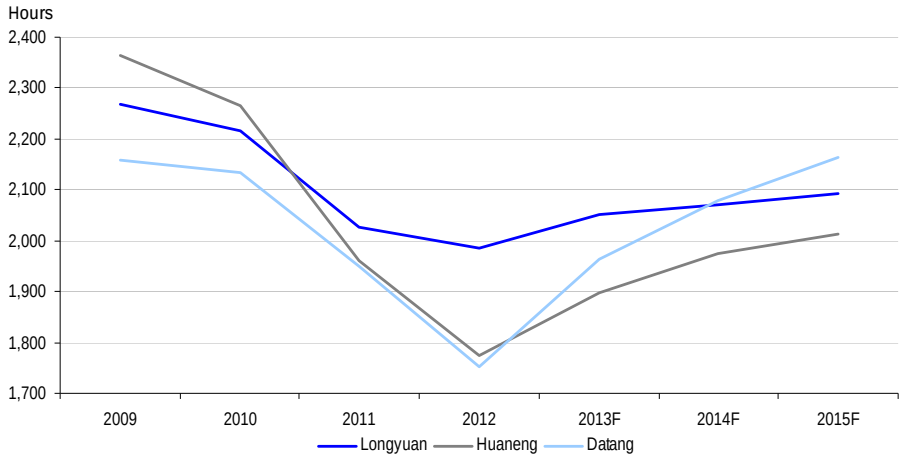
	Huaneng Renewables		Datang Renewable		Longyuan	
	MW	% breakdown	MW	% breakdown	MW	% breakdown
Three northeastern provinces	1,148	21	1,275	22	2,452	23
Inner Mongolia	1,716	31	2,458	43	2,176	21
Southeastern coastal provinces	282	5	50	1	1,675	16
Gansu	–	0	394	7	1,039	10
Xinjiang	272	5	–	0	744	7
Hebei	249	5	50	1	971	9
Other	1,791	33	1,443	25	1,487	14
	5,458	100	5,669	100	10,544	100

Source: Company data, CCBIS research

We forecast HNR's plant utilization to increase 7% in 2013F versus -10% in 2012

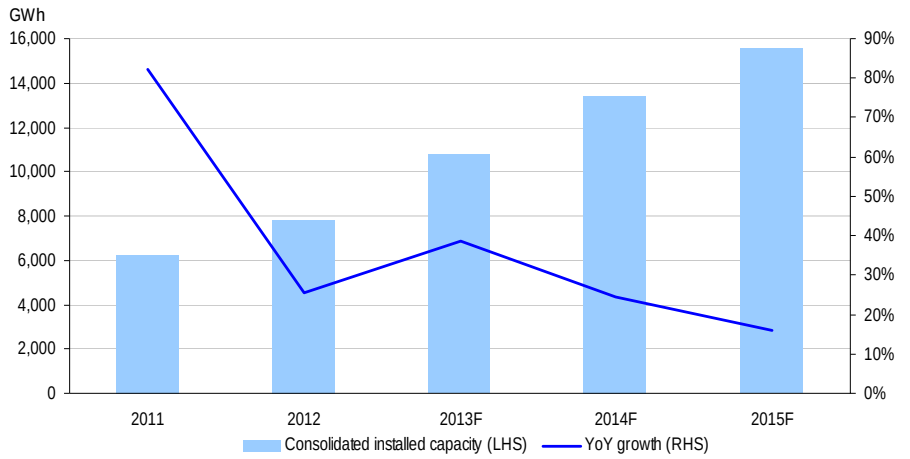
Working under the assumption that power grid curtailment will gradually improve in 2013F, especially in northeastern China and Inner Mongolia, management targets an increase in average plant utilization, from 1,774 hours in 2012 to up to 1,898 hours in 2013F. As noted in HNR's 1Q13 power generation statistics, the company's wind power generation increased considerably, by 65% YoY, with power generation in Inner Mongolia increasing 87% YoY. Due to the deep uncertainly surrounding wind resources for the year, we forecast a 39% YoY increase in HNR's net power generation in 2013F.

Average wind power utilization comparison



Source: Company data, CCBIS research

HNR – consolidated net power generation



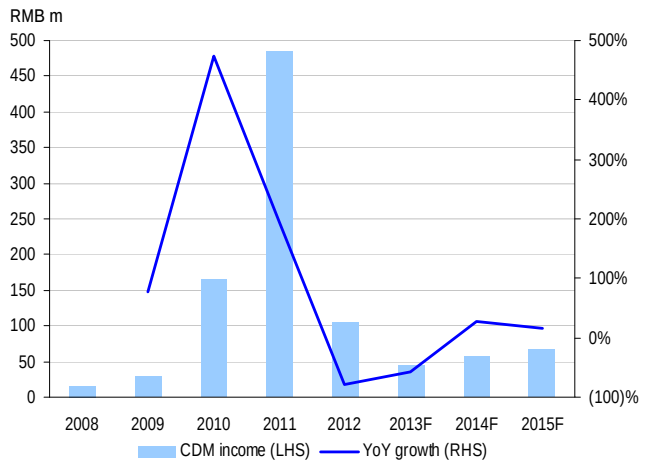
Source: Company data, CCBIS research

Diminishing concerns over CDM income cancellation

CDM income to pre-tax profit will decline to only 3% in 2013F; hence, the impact to earnings appears insignificant

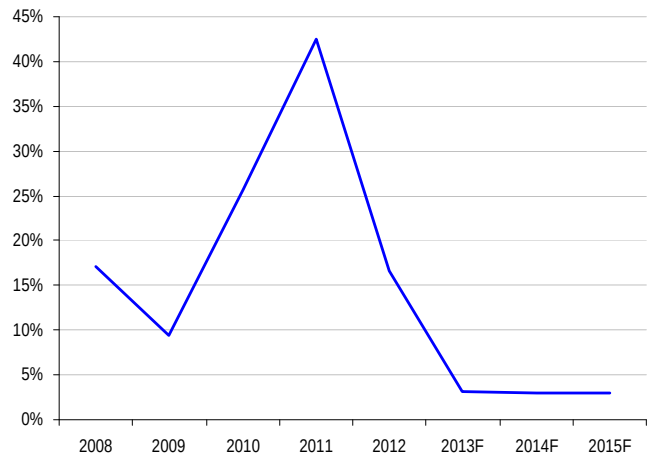
In 2012, HNR successfully registered 77 CDM projects with the United Nations Clean Development Mechanism Executive Board, increasing total CDM projects at the company to 128. During the year, HNR received CERs of 1,175,221 tonnes. However, with substantial declines in the floating price for CER (-96% YoY to EUR0.18/tonne at end-2012), HNR's CDM income fell 78% YoY to RMB105m. Assuming the CER spot price remains flat until year end, we forecast HNR's CDM income will fall 57% to RMB45m in 2013F. Uncertainly over the CER price has been a concern for HNR over the past two years given CDM income contributed 17-42% of its pre-tax profits in 2011-2012. As we forecast the percentage of CDM income to pre-tax profit will decline to only 3% in 2013F, the impact to earnings appears insignificant going forward.

HNR – CDM income forecast



Source: Company data, CCBIS research

HNR – percentage of CDM income to pre-tax profit

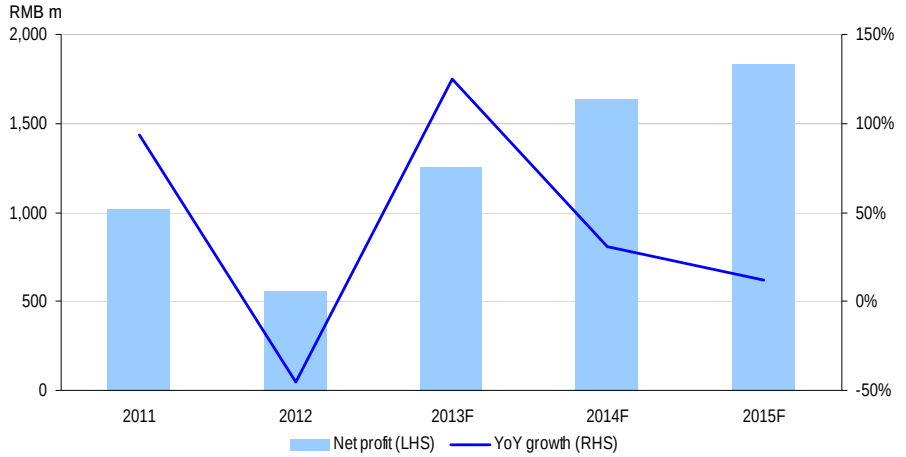


Source: Company data, CCBIS research

Net profit to return to 12-125% p.a. growth in 2013F-2015F

As HNR has a smaller capacity base than Longyuan, planned capacity of 1GW per year and an expected improvement in power grid curtailment should drive up its earnings growth rate higher than that of Longyuan. We forecast its earnings to increase at a CAGR of 49% in 2013F-2015F versus 18% for Longyuan.

HNR – net profit and YoY change in 2013F-2015F



Source: Company data, CCBIS research

The table below illustrates HNR's earnings sensitivity to several key drivers for its wind power business. We estimate that every 1.0% difference in our wind power utilization assumptions would change our 2013F earnings forecasts by 3.8%. Given there is no fuel cost risk for the wind power business, every 1.0% difference in our tariff assumptions would change our 2013F earnings by a similar magnitude (4.0%), compared with a 1.0% difference in our utilization assumption. As the weighting of CDM income to HNR's pre-tax profits is forecast to drop from 17.0% in 2012 to 3.0% in 2013F, we expect every 10.0% difference in estimated CDM income to change our 2013F earnings by only 0.3%. Given HNR's high net gearing in 2013F (228.0%), every 25bp difference in our interest rate projections would change our 2013F earnings forecast by 4.4%.

HNR – earnings sensitivity to key drivers

(%)	FY12 base case	Change	Impact to 2012F earnings
Change in average tariff	(1.4)	+/- 1	+/- 4.0
Change in plant utilization	22.4	+/- 1	+/- 3.8
Change in CDM income	RMB484m	+/- 10	+/- 0.3
Change in cost of debt	6.8	+/- 25bp	-/+ 4.4

Source: CCBIS research

Valuation and risks

We employ a DCF valuation as our primary method to value HNR as it captures the time value of its varied future cash flows, for which the company should remain free cash flow (FCF) negative in the medium term given around RMB10-12b in capex to be spent per year for its 1GW annual capacity additions. After the commissioning of new wind power projects, the company's FCF should turn positive, providing room to pay down bank borrowings. Based on an 8.7% WACC, our DCF-based 12-month target price is HK$3.00, implying 18% potential upside. Thus, we initiate coverage on HNR with an Outperform rating.

HNR – target price calculation

Total DCF/share (2014-2020) (HK$)	0.14
Terminal growth rate (%)	2.0
WACC (%)	8.7
Discount factor at 2020 (HK$)	0.56
RMB/HK$	0.80
DCF/share (terminal value in 2020) (HK$)	7.88
Total DCF/share (HK$)	8.02
Less: net debt/share (end-2013) (HK$)	(4.76)
	3.26
% shared by non-controlling shareholders	8.0
Less: value shared by minority interest (HK$)	(0.26)
DCF/share (HK$)	3.00

Source: CCBIS research

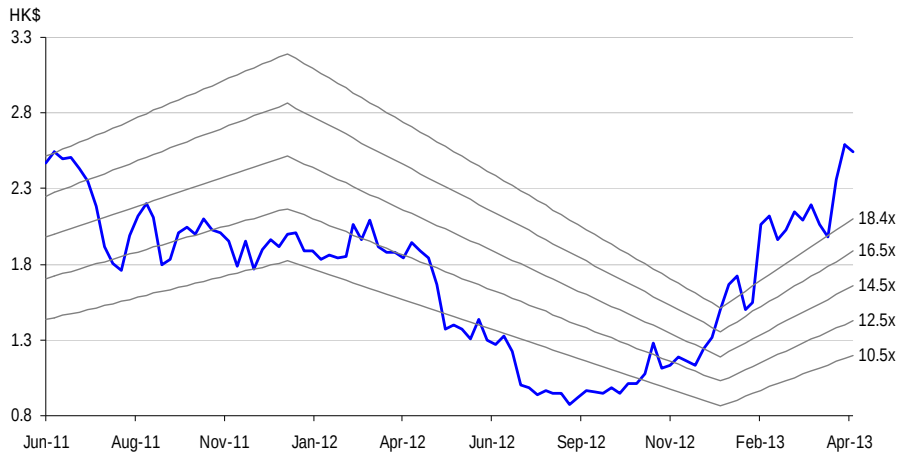
HNR – DCF sensitivity to WACC and terminal growth rate

		WACC (%)								
		6.7	7.2	7.7	8.2	8.7	9.2	9.7	10.2	10.7
Terminal growth rate	0.5	4.72	3.76	2.93	2.21	1.59	1.04	0.55	0.12	-0.27
	1.0	5.54	4.43	3.50	2.69	2.00	1.39	0.86	0.38	-0.04
	1.5	6.51	5.23	4.15	3.24	2.46	1.79	1.20	0.68	0.22
	2.0	7.69	6.17	4.93	3.88	3.00	2.24	1.59	1.01	0.51
	2.5	9.15	7.32	5.85	4.63	3.62	2.76	2.03	1.39	0.83
	3.0	11.00	8.74	6.96	5.53	4.35	3.37	2.54	1.82	1.20
	3.5	13.43	10.54	8.34	6.61	5.22	4.08	3.12	2.31	1.62

Source: CCBIS research

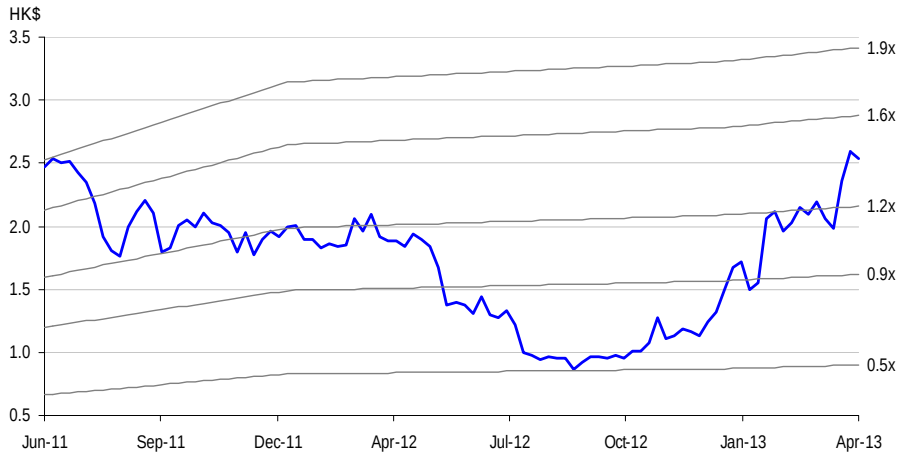
In terms of P/E valuation, HNR also looks attractive at 14x and a high EPS CAGR of 49% for 2013F-2015F. On P/B valuation, HNR is trading at 1.3x, a 19% discount to Longyuan.

HNR – rolling P/E bands



Source: Company data, CCBIS research

HNR – rolling P/B bands



Source: Company data, CCBIS research

We believe that the key downside risks to our target price include: (1) slower capacity expansion should stringent power grid curtailment remain unchanged in the next three years, and (2) higher-than-expected interest rate hikes given the company's high net gearing. Upside risks include: (1) a rebound in CER price that drives higher CDM income, and (2) an increase in utilization following the resolution of power grid curtailment in areas where HNR's wind farms are located.

Catalysts for the shares

We believe the key catalysts for HNR's shares are: (1) achieving its target of 1GW in newly added capacity per year, and (2) a rebound in utilization to rebound of at least 7% in 2013F.

How we differ from consensus

Our 2013F-2015F earnings forecasts are +25%, +15% and +2% above consensus. We believe that the discrepancy is due to the market having not yet factored in substantial utilization improvement as power grid curtailment eases over the next three years.

HNR – CCBI's earnings forecast vs. consensus

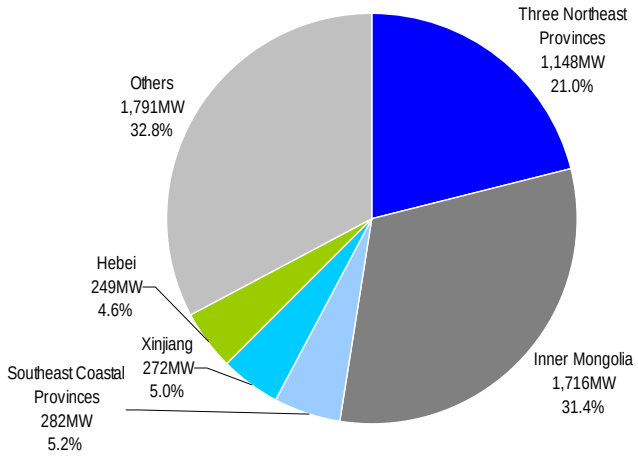
				CCBI rating		
RMB m	2013F	2014F	2015F	Outperform	Neutral	Underperform
CCBI earnings forecast	1,254	1,638	1,838	Outperform		
YoY % change	*125*	*31*	*12*			
% difference to consensus	25	15	2			
Consensus earnings forecast	1,005	1,424	1,803	11	5	1
YoY % change	*80*	*42*	*27*			

Source: CCBIS research

Business summary

HNR is a subsidiary company of Huaneng Group (one of the Big Five power generating groups in China) and was ranked third in terms of market share of wind power capacity in China at end-2012 (8% of total). Of its total consolidated wind power capacity of 5.5GW, around 64% is located in northeastern China, Inner Mongolia, and in the southeastern coastal provinces of Gansu, Xinjiang and Hebei.

HNR – attributable operational capacity by location



Source: Company data, CCBIS research

HNR – key assumptions

	2011	2012	2013F	2014F	2015F
Consolidated capacity (MW)					
Wind power	4,904	5,457	6,457	7,457	8,457
% change	*39.2*	*11.3*	*18.3*	*15.5*	*13.4*
Consolidated net power generation (GWh)					
Wind power	6,206	7,786	10,796	13,425	15,579
% change	*82.3*	*25.5*	*38.6*	*24.4*	*16.0*
Average utilization hours					
Wind power	1,962	1,774	1,898	1,974	2,014
% change	*(13.4)*	*(9.6)*	*7.0*	*4.0*	*2.0*
Average tariff (excl VAT) (RMB/MWh)					
Wind power	509	517	517	517	517
% change	*(1.4)*	*1.5*	*0.0*	*0.0*	*0.0*
Revenue (RMB m)					
Sales of electricity – wind power	3,160	4,025	5,581	6,941	8,054
% change	*79.7*	*27.4*	*38.6*	*24.4*	*16.0*
Other	36	1	1	1	1
% change	*259.5*	*(96.0)*	*0.0*	*0.0*	*0.0*
Total	3,196	4,027	5,583	6,942	8,055
% change	*80.7*	*26.0*	*38.6*	*24.4*	*16.0*
Other net income (RMB m)					
CDM income	484	105	45	58	66
% change	*193.4*	*(78.3)*	*(57.0)*	*27.3*	*15.0*
Government grants	109	84	122	207	246
% change	*30.7*	*(23.1)*	*45.4*	*69.8*	*18.7*
Other	90	1	0	0	0
% change	*5635.2*	*(99.3)*	*(100.0)*	*NM*	*NM*
Total	683	190	167	265	312
% change	*173.2*	*(72.2)*	*(11.8)*	*58.3*	*17.9*

Source: Company data, CCBIS estimates

HNR – consolidated income statement

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Revenue					
Sale of electricity – wind power	3,160	4,025	5,581	6,941	8,054
Other	36	1	1	1	1
	3,196	4,027	5,583	6,942	8,055
% change	*80.7*	*26.0*	*38.6*	*24.4*	*16.0*
Other net income					
CDM	484	105	45	58	66
Government grants	109	84	122	207	246
Other	90	1	0	0	0
	683	190	167	265	312
% change	*173.2*	*(72.2)*	*(11.8)*	*58.3*	*17.9*
Less: operating costs					
Depreciation and amortization	(1,169)	(1,612)	(2,013)	(2,447)	(2,882)
Labour costs	(118)	(151)	(190)	(234)	(283)
Repair & maintenance	(30)	(50)	(67)	(101)	(140)
Administration expenses	(118)	(127)	(145)	(179)	(217)
Other	(92)	(104)	(125)	(154)	(178)
	(1,527)	(2,044)	(2,541)	(3,116)	(3,700)
% change	*72.7*	*33.9*	*24.3*	*22.6*	*18.7*
Operating profit (EBIT)	2,351	2,172	3,209	4,091	4,667
% change	*107.3*	*-7.6*	*47.7*	*27.5*	*14.1*
Operating profit margin	60.6	51.5	55.8	56.8	55.8
Net interest expense	(1,212)	(1,542)	(1,780)	(2,158)	(2,423)
Profit before taxation	1,139	631	1,429	1,932	2,245
Tax	(32)	(30)	(71)	(153)	(242)
Profit for the year	1,107	601	1,357	1,780	2,002
Non-controlling interests	(84)	(43)	(103)	(141)	(164)
Net profit	1,023	558	1,254	1,638	1,838
% change	*93.7*	*(45.5)*	*124.8*	*30.6*	*12.2*

Source: Company data, CCBIS estimates

HNR – consolidated cash flow statement

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Operating activities					
Net cash from operations	2,584	3,485	2,665	4,211	5,362
Taxes paid	(22)	(14)	(33)	(71)	(113)
	2,562	3,471	2,632	4,139	5,249
Investing activities					
(Increase)/decrease in fixed assets	(7,699)	(5,706)	(10,037)	(10,525)	(11,021)
Interest received	43	92	63	46	37
Other	(131)	0	0	0	0
	(7,787)	(5,614)	(9,974)	(10,479)	(10,984)
Financing activities					
Shares issues/(repurchases), net	5,403	0	0	0	0
Increase/(decrease) in bank loans	7,998	0	5,000	6,600	6,200
Increase/(decrease) from NCI	(77)	94	88	59	44
Dividend paid	0	0	(127)	(285)	(372)
Interest paid	(1,316)	0	0	0	0
Other	(428)	0	0	0	0
	11,580	94	4,961	6,374	5,872
Increase/(decrease) in cash	6,355	(2,049)	(2,381)	35	137
Cash at beginning of year	1,298	7,506	5,457	3,076	3,111
Effect on FX change	(146)	0	0	0	0
Cash at end of year	7,506	5,457	3,076	3,111	3,248
Add: pledged bank deposits	12	12	12	12	12
Cash balance at bal sheet	7,518	5,469	3,088	3,123	3,260

Source: Company data, CCBIS estimates

HNR – consolidated balance sheet

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Current assets					
Inventories	2	4	5	6	8
Trade and other receivables	2,595	3,864	5,078	5,620	5,716
Restricted deposits	59	209	209	209	209
Bank balances and cash	7,518	5,469	3,088	3,123	3,260
	10,174	9,546	8,379	8,958	9,193
Non-current assets					
Property, plant and equipment	36,956	39,859	48,947	56,949	65,010
Intangible assets	381	364	421	451	482
Investment in associates & JCE	85	85	85	85	85
Other	3,933	3,845	3,654	3,713	3,774
	41,356	44,153	53,108	61,199	69,351
Total assets	51,531	53,699	61,487	70,157	78,544
Current liabilities					
Borrowings – current	6,759	8,276	9,643	11,447	13,141
Payables	8,839	6,214	6,413	6,725	7,042
Other	301	392	430	451	462
	15,899	14,882	16,486	18,623	20,645
Non-current liabilities					
Borrowings – non-current	19,257	22,005	25,638	30,434	34,940
Deferred income	258	273	317	361	406
Other	3,958	3,848	5,036	5,175	5,315
	23,472	26,126	30,991	35,971	40,661
Non-controlling interest	828	871	1,062	1,262	1,470
Equity and reserves	11,332	11,820	12,947	14,301	15,767
Total equity and liabilities	51,531	53,699	61,487	70,157	78,544

Source: Company data, CCBIS estimates

HNR – key financial ratios

Year to 31 December	2011	2012	2013F	2014F	2015F
EPS (HK$)	0.17	0.08	0.19	0.24	0.27
EPS growth (%)	*61.9*	*(52.6)*	*127.0*	*30.6*	*12.2*
PE (x)	14.6	30.9	13.6	10.4	9.3
DPS (HK$)	0.00	0.02	0.04	0.06	0.06
DPS growth (%)	*NM*	*NM*	*127.0*	*30.6*	*12.2*
Yield (%)	0.0	0.7	1.7	2.2	2.4
Cash earnings/share (HK$)	0.37	0.32	0.49	0.61	0.70
P/CE (x)	6.8	7.9	5.2	4.2	3.6
BV/share (HK$)	1.7	1.7	1.9	2.1	2.3
P/BV (x)	1.5	1.5	1.3	1.2	1.1
EV (HK$m)	44,206	52,060	61,643	69,892	77,509
EBITDA (HK$m)	4,344	4,707	6,562	8,215	9,486
EV/EBITDA (x)	10.2	11.1	9.4	8.5	8.2
Net debt/(cash) (HK$m)	18,438	24,603	31,985	38,550	44,612
Net debt/equity (%)	151.6	193.9	228.3	247.7	258.8
Interest cover (x)	1.9	1.4	1.8	1.9	1.9
ROE (%)	12.3	4.8	10.1	12.0	12.2

Source: Company data, CCBIS estimates

China Longyuan Power (916 HK)

Fairy priced on high growth

- **Initiate with Neutral**, as our DCF-based target price of HK$7.50 suggests only 4% potential upside. In terms of 2013F P/E valuation, China Longyuan Power is trading on par to its two-year average of 15x with an EPS CAGR of 18% for 2013F-2015F.

- **More diversified wind power portfolio** has helped Longyuan cushion the impact of power grid curtailment in Inner Mongolia and northeastern China (plant utilization -2% in 2012 versus -10% for peers). Assuming power grid curtailment will gradually improve, utilization recovery for Longyuan (+3% in 2013F) should be slower than peers (up 7-12%).

- **Capacity expansion to continue**, backed by the company's 3GW-approved wind power projects by end-2012 together with expected improvement in power grid curtailment in 2013F. Should Longyuan meet expectations and add 2GW wind power capacity in 2013F-2015F, it would likely translate to a three-year capacity CAGR of 16%.

- **Diminishing concerns over CDM income cancellation.** Due to substantial declines in the floating price for CERs and after the expiry of fixed-price contracts by end-2012, we conservatively assume Longyuan's CDM income will fall 88% in 2013F. As we forecast the percentage of CDM income to pre-tax profit will decline from 20% in 2012 to only 2% in 2013F, the impact to earnings appears insignificant going forward.

Forecasts and valuation

Year to 31 December	2011	2012	2013F	2014F	2015F
Revenue (RMB m)	15,791	16,770	19,516	21,785	24,131
Operating profit (RMB m)	5,103	6,045	7,288	8,503	9,778
Operating margin (%)	29.9	33.5	36.1	37.8	39.3
Net profit (RMB m)	2,578	2,593	3,150	3,747	4,516
EPS (HK$)	0.43	0.43	0.49	0.59	0.71
YoY change (%)	34.3	1.2	14.2	19.0	20.5
P/E (x)	16.9	16.7	14.6	12.3	10.2
Dividend yield (%)	1.2	1.1	1.4	1.6	1.9
Price/book value (x)	1.7	1.6	1.4	1.3	1.2
ROE (%)	10.5	9.4	10.2	11.1	12.2
Net gearing (%)	156	146	153	155	153

Source: Company data, CCBIS estimates

Company Rating: Neutral
(initiation)

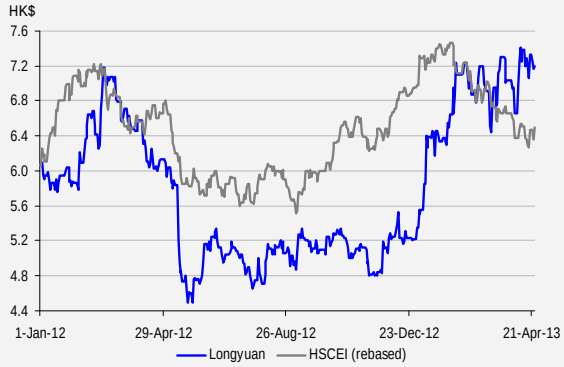
Price: HK$7.19
Target: HK$7.50
(initiation)

Trading data

52-week range	HK$4.47-7.53
Market capitalization (b)	HK$58.2/US$7.5
Shares outstanding (m)	8,036
Free float (%)	42
3M average daily T/O (m share)	21.3
3M average daily T/O (US$m)	18.8
Expected return – 1 year (%)	4

Price as at close on 24 April 2013

Stock price and HSCEI



Source: Bloomberg

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Fairly priced on high growth

More diversified wind power portfolio

Longyuan's average wind power utilization declined only 2% in 2012 versus -10% for peers

Similar to other wind IPPs, Longyuan was affected by both poor wind resources and power grid curtailment in 2012. Among all the provinces with rich wind resources, Jilin, Inner Mongolia and Hebei were the most affected with curtailment percentages of 17-34%. As Longyuan's wind power portfolio is more diversified than peers with only 28% of the wind power portfolio located in Jilin, Inner Mongolia and Hebei, the company's average wind power utilization dipped only 2% YoY in 2012 versus -10% for both HNR and DTR.

Wind power portfolio (end-December 2012)

MW	Huaneng Renewables	Datang Renewable	Longyuan
Three northeastern provinces	1,148	1,275	2,452
Inner Mongolia	1,716	2,458	2,176
Southeastern coastal provinces	282	50	1,675
Gansu	–	394	1,039
Xinjiang	272	–	744
Hebei	249	50	971
Other	1,791	1,443	1,487
Total	5,458	5,669	10,544

Source: Companydata, CCBIS research

Percentage breakdown of wind power portfolio (end-December 2012)

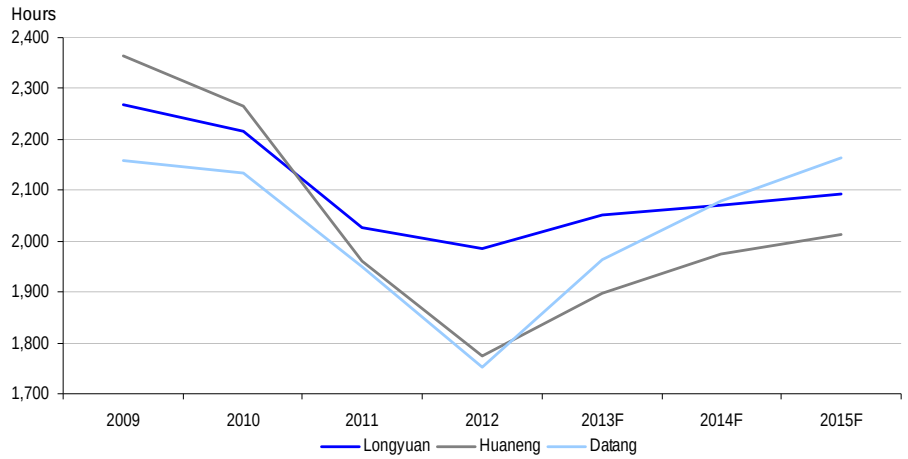
(%)	Huaneng Renewables	Datang Renewable	Longyuan
Three northeastern provinces	21	22	23
Inner Mongolia	31	43	21
Southeastern coastal provinces	5	1	16
Gansu	0	7	10
Xinjiang	5	0	7
Hebei	5	1	9
Other	33	25	14
Total	100	100	100
% Wind farms in the three northeastern provinces and Inner Mongolia	52	66	44

Source: Company data, CCBIS research

We expect Longyuan's average plant utilization to increase 3% in 2013F. The pace of recovery should be slower than peers

Working under the assumption power grid curtailment gradually improves in 2013F, especially in northeastern China and Inner Mongolia, management targets an increase in average plant utilization of 3% YoY to 2,050 hours. As HNR and DTR are more exposed to northeastern China and Inner Mongolia, their average plant utilization should recover at a faster pace than Longyuan. As noted in Longyuan's 1Q13 power generation statistics, the company's wind power generation increased 33% YoY, which is lower than +65% YoY growth at HNR.

Average wind power utilization comparison



Source: Company data, CCBIS research

Capacity expansion to continue

We forecast Longyuan will add 2GW wind power capacity p.a. in 2013F-2015F, translating to three-year capacity CAGR of 16%

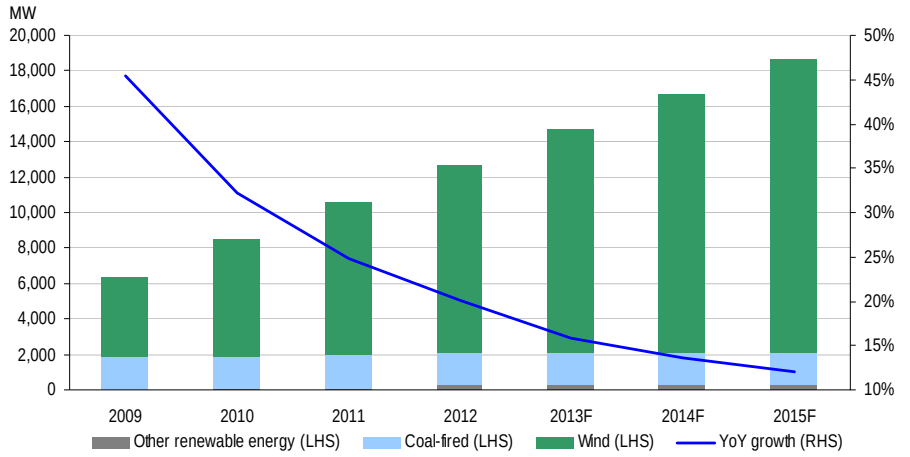
Although the newly added wind power capacity in China has decreased over the past three years (19GW in 2010, 18GW in 2011 and 13GW in 2012), Longyuan nevertheless managed to add 2GW wind power capacity per year in 2010-2012. To minimize the impact of power grid curtailment, the company has shifted its focus to those areas with well-developed power grid networks and lower wind power utilization. For 2013F, management targets adding 1.6-2.0GW wind power capacity, taking into account its 3GW wind power projects approved prior to end-2012. Management stated that the possibility of an asset injection is low in the near term due to low returns for parental wind farms. We expect power grid curtailment to improve gradually and for newly installed wind power capacity to be higher this year. Based on these assumptions, we forecast Longyuan will maintain its current pace of expansion by adding 2GW wind power capacity p.a. in the coming years.

Longyuan – newly added capacity by location

	2010 capacity (MW)	% of total	2011 capacity (MW)	% of total	2012 capacity (MW)	% of total
Heilongjiang	143	7	149	7	48	2
Jilin	50	2	0	0	0	0
Liaoning	149	7	149	7	99	5
Inner Mongolia	444	22	491	24	248	13
Jiangsu	121	6	221	11	230	12
Zhejiang	16	1	45	2	0	0
Fujian	84	4	96	5	98	5
Hainan	50	2	0	0	0	0
Gansu	452	22	99	5	82	4
Xinjiang	149	7	50	2	297	15
Hebei	200	10	249	12	100	5
Yunnan	50	2	0	0	248	13
Anhui	149	7	99	5	99	5
Shandong	0	0	50	2	50	3
Tianjin	0	0	99	5	0	0
Ningxia	0	0	50	2	50	3
Shanxi	0	0	99	5	249	13
Guizhou	0	0	99	5	50	3
	2,053	100	2,042	100	1,945	100

Source: Company data, CCBIS research

Longyuan – capacity expansion by fuel type



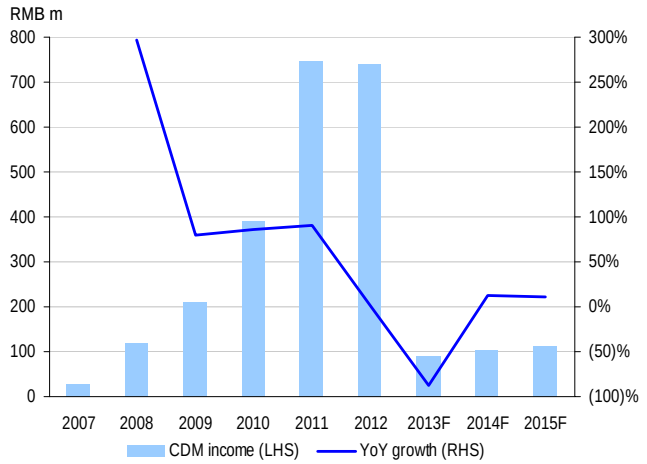
Source: Company data, CCBIS research

Diminishing concerns over CDM income cancellation

Based on the expectation that CDM income will suffer a 90% decline in 2013F, we expect contribution to pre-tax to decline to only 2%; hence, the impact to earnings appears insignificant

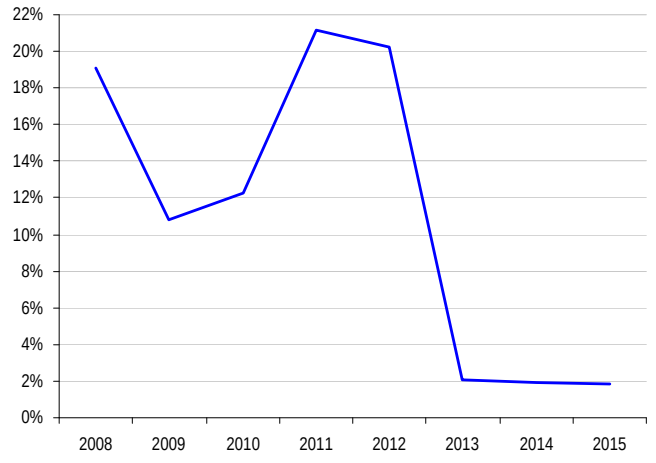
Longyuan successfully registered 83 CDM projects with total installed capacity of 3,826MW in 2012, increasing the company's total number of CDM projects to 190 with cumulative installed capacity of 9,878MW at end-2012. However, its CDM income fell 0.5% YoY to RMB742m, mainly due to a substantial decline in floating price for CERs (-96% YoY to EUR0.18/tonne at end-2012). After the expiry of all fixed-priced contracts (70% of Longyuan's total CERs) by end-2012, all of the CERs will be settled in floating price. We conservatively assume Longyuan's CDM income will decline 90% to RMB91m in 2013F. Uncertainty on CER price has been a concern for Longyuan over the past two years given CDM income contributed over 20% of the company's pre-tax profit in 2011-2012. As we forecast the percentage of CDM income to pre-tax profit will decline from 20% in 2012 to only 2% in 2013F, the impact to earnings appears insignificant going forward.

Longyuan – CDM income forecast



Source: Company data, CCBIS research

Longyuan – percentage of CDM income to pre-tax profit

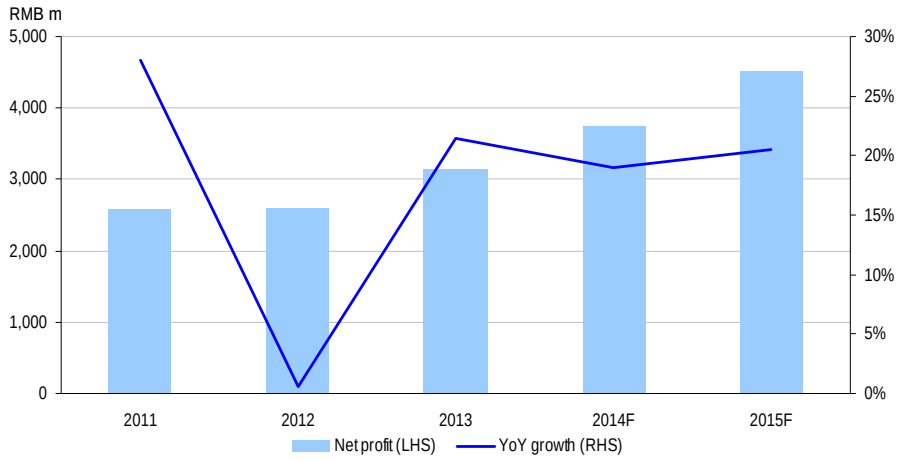


Source: Company data, CCBIS research

Net profit to return to 19-22% growth in 2013F-2015F

After factoring in 2GW wind power capacity expansion, modest improvements in plant utilization and stabilized CER price, we forecast Longyuan's net profit will return to high growth of 22% in 2013F, 19% in 2014F and 21% in 2015F.

Longyuan – net profit and YoY change in 2013F-2015F



Source: Company data, CCBIS research

The table below shows the sensitivity of Longyuan's earnings to key drivers for its wind power and coal-fired power businesses. As the wind power business contributes a significant portion of Longyuan's total earnings, its earnings are more sensitive to drivers for the wind power business. We estimate a 1.0% difference in our wind power utilization assumptions would change our 2013F earnings by 2.5% compared with a 0.4% earnings change for a 1.0% difference in coal-fired power utilization. For its coal-fired power business, a 1.0% difference in our assumptions on tariffs or unit fuel costs would change our 2013F earnings forecasts by 1.0% and 0.6%, respectively.

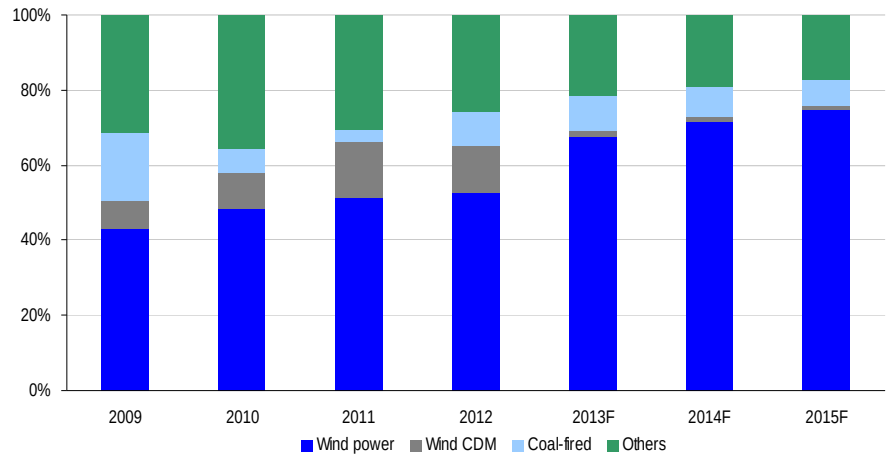
Longyuan – earnings sensitivity to key drivers

Earnings drivers (%)	Change	Impact on earnings
Growth in average tariff	+/- 1	+/- 3.5
Growth in unit fuel cost	+/- 1	-/+ 0.6
Average plant utilisation	+/- 1	+/- 2.9
Interest rate	+/- 25bp	-/+ 3.0

Source: CCBIS research

Longyuan also operates other businesses. Contribution from wind power business (electricity sales + CDM income) will account for 69% of its total operating profit in 2013F versus more than 95% for Huaneng Renewables (958 HK, Outperform) and Datang Renewable (1798 HK, Outperform). As such, better-than-expected improvement in wind power business would have less impact on Longyuan than its peers.

Longyuan – percentage breakdown of operating profits



Source: Company data, CCBIS research

Valuation and risks

We employ a DCF valuation analysis to value Longyuan as we believe it captures the time value of its various future cash flows. In particular, Longyuan is likely to remain free-cash-flow negative over the next few years as its capex is expected to remain high on the back of around 2GW in wind power capacity additions per year. After this high-growth period, free cash flow should turn positive, providing room to pay down bank loans. Based on a WACC of 8.7%, we derive our DCF-based target price of HK$7.50, which implies 4% potential upside; hence, we initiate coverage on Longyuan with a Neutral rating.

Longyuan – target price calculation

Total DCF/share (2014-2020) (HK$)	3.09
Terminal growth rate (%)	2.0
WACC (%)	8.7
Discount factor at 2020 (HK$)	0.56
RMB/HK$	0.80
DCF/share (terminal value in 2020) (HK$)	15.76
Total DCF/share (HK$)	18.85
Less: net debt/share (end-2013)	(9.47)
	9.38
% shared by non-controlling shareholders	20.0
Less: value shared by MI	(1.88)
DCF/share (HK$)	7.50

Source: CCBIS research

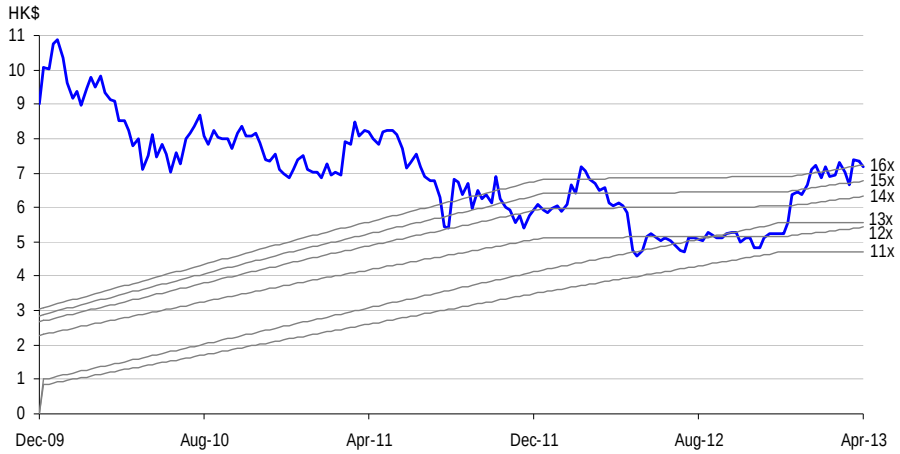
Longyuan – DCF sensitivity to WACC and terminal growth rate

Terminal growth rate	WACC (%)								
	6.7	7.2	7.7	8.2	8.7	9.2	9.7	10.2	10.7
0.5	10.53	8.85	7.40	6.14	5.04	4.08	3.22	2.45	1.77
1.0	11.96	10.02	8.38	6.98	5.76	4.69	3.75	2.92	2.17
1.5	13.65	11.40	9.53	7.93	6.57	5.38	4.35	3.43	2.62
2.0	15.71	13.05	10.87	9.05	7.50	6.17	5.02	4.02	3.13
2.5	18.25	15.05	12.47	10.35	8.58	7.08	5.79	4.67	3.69
3.0	21.48	17.52	14.42	11.91	9.85	8.13	6.67	5.42	4.33
3.5	25.72	20.66	16.82	13.80	11.37	9.37	7.70	6.28	5.06

Source: CCBIS research

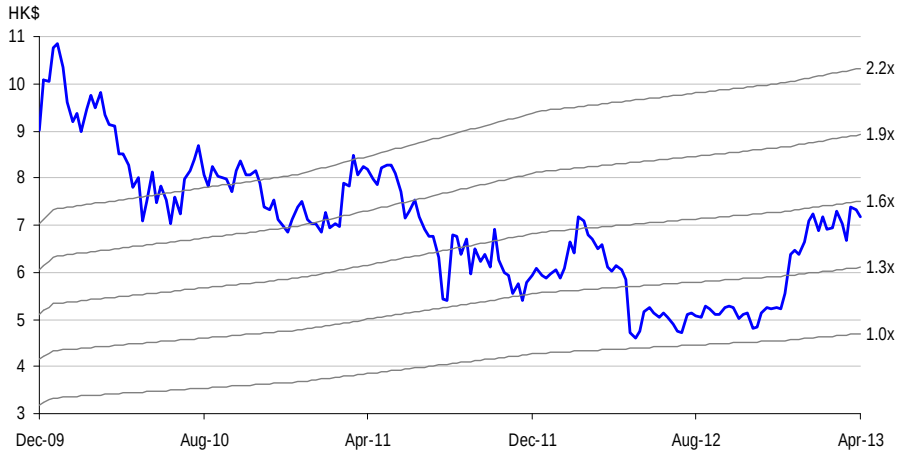
In terms of P/E valuation, Longyuan is trading at a P/E of 15x in 2013F, which is on par to its two-year average of 15x. Its P/E valuation appears fully valued. In terms of P/B valuation, Longyuan is also trading on par to its two-year average of 1.4x.

Longyuan – rolling P/E bands



Source: Company data, CCBIS research

Longyuan – rolling P/B bands



Source: Company data, CCBIS research

We believe that the key downside risks to our target price include: (1) slower capacity expansion should stringent grid curtailment remain in place in the near term, and (2) higher-than-expected interest rate hikes given the company's high net gearing.

Upside risks include: (1) a rebound in CER price that drives CDM income higher, and (2) higher utilization following the resolution of grid curtailment in areas where Longyuan's wind farms are located.

How we differ from consensus

Our 2013-2015 earnings estimates are +4%, -2% and -3% different from consensus. We believe that the discrepancies are due to our conservative assumptions on the pace of the company's utilization recovery in 2014F-2015F (utilization to increase by 1% each year from 2014F to 2015F).

Longyuan – CCBI's earnings forecast versus consensus

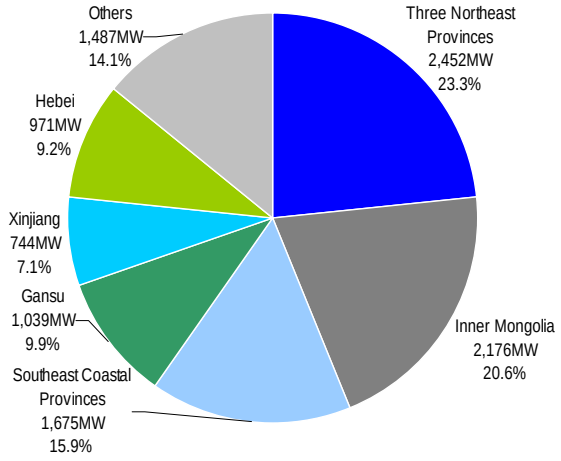
				CCBI rating		
RMB m	2013F	2014F	2015F	Outperform	Neutral	Underperform
CCBI earnings forecast	3,150	3,747	4,516		Neutral	
YoY % change	*21*	*19*	*21*			
% difference to consensus	4	(2)	(3)			
Consensus earnings forecast	3,037	3,829	4,673	17	5	3
YoY % change	17	26	22			

Source: CCBIS research

Business summary

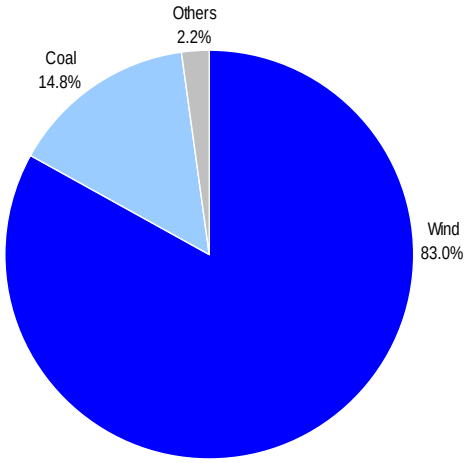
Longyuan is a subsidiary company of Guodian Power Group (one of the Big Five power generating groups in China). It enjoyed the largest market share in terms of wind power capacity in China by end-2012 (20% of total). Of its total consolidated wind power capacity of 10.5GW, more than 80% is located in northeastern China, Inner Mongolia, China's southeastern coastal provinces, Gansu, Xinjiang and Hebei. Apart from that, Longyuan also operates coal-fired power plants and other renewable energy plants, with attributable capacity of 539MW and 251MW, respectively, as at end-2012.

Longyuan – attributable operational capacity by location



Source: Company data, CCBIS research

Longyuan – attributable operational capacity by type



Source: Company data, CCBIS research

Longyuan – key assumptions

Year to 31 December	2011	2012	2013F	2014F	2015F
Consolidated capacity (MW)					
Wind power	8,598	10,544	12,544	14,544	16,544
% change	*31.1*	*22.6*	*19.0*	*15.9*	*13.8*
Coal-fired power	1,875	1,875	1,875	1,875	1,875
% change	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Other	100	279	279	279	279
	137.9	*179.3*	*0.0*	*0.0*	*0.0*
Total	10,573	12,698	14,698	16,698	18,698
% change	*24.8*	*20.1*	*15.8*	*13.6*	*12.0*
Consolidated net power generation (GWh)					
Wind power	13,061	16,027	21,182	25,340	29,578
% change	*38.3*	*22.7*	*32.2*	*19.6*	*16.7*
Coal-fired power	10,672	10,497	10,497	10,497	10,497
% change	*0.0*	*(1.6)*	*0.0*	*0.0*	*0.0*
Other	427	506	506	506	506
	354.3	*18.5*	*0.0*	*0.0*	*0.0*
Total	24,160	27,030	32,185	36,343	40,581
% change	19.6	11.9	19.1	12.9	11.7
Average utilization hours					
Wind power	2,026	1,985	2,050	2,071	2,091
% change	*(8.6)*	*(2.0)*	*3.3*	*1.0*	*1.0*
Coal-fired power	6,266	5,990	5,990	5,990	5,990
% change	*3.5*	*(4.4)*	*0.0*	*0.0*	*0.0*
Average tariff (RMB/MWh)					
Wind power	494	497	500	500	500
% change	*1.0*	*0.7*	*0.5*	*0.0*	*0.0*
Coal-fired power	370	386	386	392	400
% change	*2.4*	*4.4*	*0.0*	*1.4*	*2.1*

Source: Company data, CCBIS estimates

Longyuan – consolidated income statement

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Revenue					
Sale of electricity					
Wind	6,449	7,978	10,599	12,679	14,800
Coal-fired	3,945	4,055	4,055	4,112	4,198
Other	301	371	371	371	371
	10,695	12,404	15,025	17,162	19,369
Other	5,096	4,365	4,490	4,623	4,762
	15,791	16,770	19,516	21,785	24,131
% change	*23.7*	*6.2*	*16.4*	*11.6*	*10.8*
Other net income					
CDM	746	742	91	102	114
Government grants	406	402	426	445	469
Other	144	152	148	152	156
	1,296	1,296	664	699	738
% change	*31.4*	*0.0*	*(48.7)*	*5.2*	*5.7*
Less: operating costs					
Coal consumption	(2,877)	(2,627)	(2,522)	(2,573)	(2,650)
Depreciation and amortization	(2,998)	(3,697)	(4,344)	(4,979)	(5,608)
Personnel costs	(805)	(925)	(1,012)	(1,109)	(1,198)
Material costs	(4,375)	(3,676)	(3,786)	(3,900)	(4,017)
Repair and maintenance	(257)	(305)	(341)	(395)	(450)
Administration expenses	(308)	(402)	(450)	(520)	(593)
Other	(364)	(390)	(437)	(505)	(576)
	(11,984)	(12,021)	(12,892)	(13,981)	(15,092)
% change	*23.8*	*0.3*	*7.2*	*8.4*	*7.9*
Operating profit (EBIT)	5,103	6,045	7,288	8,503	9,778
% change	*25.3*	*18.5*	*20.6*	*16.7*	*15.0*
Operating profit margin	29.9	33.5	36.1	37.8	39.3
Net interest expenses	(1,638)	(2,518)	(3,034)	(3,432)	(3,779)
Share of associates	60	140	169	197	227
Exceptional item	0	0	0	0	0
Profit before taxation	3,526	3,667	4,423	5,268	6,226
Tax	(305)	(342)	(535)	(765)	(905)
Profit after taxation	3,221	3,325	3,888	4,503	5,321
Non-controlling interest	(642)	(732)	(738)	(756)	(804)
Net profit	2,578	2,593	3,150	3,747	4,516
% change	*28.1*	*0.6*	*21.5*	*19.0*	*20.5*

Source: Company data, CCBIS estimates

Longyuan – consolidated cash flow statement

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Operating activities					
Net cash from operations	6,211	7,340	11,956	13,924	16,038
Taxes paid	(371)	(342)	(535)	(765)	(905)
	5,840	6,998	11,421	13,159	15,133
Investing activities					
(Increase)/decrease in fixed assets	(13,045)	(15,290)	(15,031)	(15,717)	(16,411)
Interest received	124	67	85	88	89
Other	(1,113)	1,106	68	79	91
	(14,034)	(14,117)	(14,879)	(15,550)	(16,232)
Financing activities					
Increase/(decrease) in bank loans	10,506	12,066	8,000	6,500	6,200
Increase/(decrease) from owner and NCI	(372)	(108)	(106)	(108)	(118)
Dividends paid	(403)	(515)	(512)	(622)	(740)
Interest paid	(2,094)	(2,796)	(3,198)	(3,568)	(3,892)
	7,637	8,646	4,184	2,202	1,450
Increase/(decrease) in cash	(557)	1,527	726	(189)	351
Cash at beginning of year	4,081	3,511	5,247	5,973	5,784
Effect on FX change	(13)	0	0	0	0
Cash at end of year	3,511	5,038	5,973	5,784	6,136
Add: Pledged bank deposits	197	100	100	100	100
Cash balance at balance sheet	3,708	5,138	6,073	5,884	6,236

Source: Company data, CCBIS estimates

Longyuan – consolidated balance sheet

Year to 31 December (RMB m)	2011	2012	2013F	2014F	2015F
Current assets					
Inventories	926	816	824	851	882
Trade and other receivables	8,329	11,153	11,534	11,735	11,742
Restricted deposits	32	232	0	0	0
Bank balances and cash	3,708	5,138	6,073	5,884	6,236
Other	478	448	448	448	448
	13,473	17,786	18,878	18,917	19,308
Non-current assets					
Property, plant and equipment	66,182	74,770	83,437	91,597	101,443
Investment properties	98	76	91	88	85
Investment in associates and JCE	1,554	2,127	2,228	2,347	2,483
Intangible assets and goodwill	8,174	8,333	8,944	9,634	10,344
Other	5,143	4,747	4,716	6,633	6,916
	81,151	90,054	99,416	110,300	121,271
Total assets	94,624	107,840	118,295	129,217	140,579
Current liabilities					
Account payables and other payables	10,601	9,786	9,139	9,895	10,666
Short-term bank borrowing	19,078	26,170	29,739	32,640	35,406
Other	158	119	144	172	207
	29,836	36,075	39,023	42,706	46,279
Non-current liabilities					
Bank loans	31,828	32,482	36,913	40,512	43,946
Other	2,634	2,861	2,667	2,533	2,426
	34,462	35,343	39,580	43,046	46,372
Non-controlling interests	4,417	6,992	7,624	8,272	8,958
Equity and reserves	25,909	29,429	32,067	35,193	38,969
Total equity and liabilities	94,624	107,840	118,295	129,217	140,579

Source: Company data, CCBIS estimates

Longyuan – key financial ratios

Year to 31 December	2011	2012	2013F	2014F	2015F
EPS (HK$)	0.43	0.43	0.49	0.59	0.71
EPS growth (%)	*34.3*	*1.2*	*14.2*	*19.0*	*20.5*
PE (x)	16.9	16.7	14.6	12.3	10.2
DPS (HK$)	0.09	0.08	0.10	0.12	0.14
DPS growth (%)	*34.1*	*(7.0)*	*22.7*	*19.0*	*20.5*
Yield (%)	1.2	1.1	1.4	1.6	1.9
Cash earnings/share (HK$)	0.92	1.05	1.17	1.36	1.58
P/CE (x)	7.8	6.9	6.1	5.3	4.5
BV/share (HK$)	4.3	4.6	5.0	5.5	6.1
P/BV (x)	1.7	1.6	1.4	1.3	1.2
EV (HK$m)	111,867	124,061	133,898	142,302	149,650
EBITDA (HK$m)	10,070	12,292	14,828	17,188	19,617
EV/EBITDA (x)	11.1	10.1	9.0	8.3	7.6
Net debt/(cash) (HK$m)	47,166	53,283	60,579	67,268	73,116
Net debt/equity (%)	155.5	146.3	152.6	154.8	152.6
Interest cover (x)	3.1	2.4	2.4	2.5	2.6
ROE (%)	10.5	9.4	10.2	11.1	12.2

Source: Company data, CCBIS estimates

Rating definitions

Outperform (O) – expected return > 10% over the next twelve months

Neutral (N) – expected return between -10% and 10% over the next twelve months

Underperform (U) – expected return < -10% over the next twelve months

Analyst Certification:

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